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## ABSTRACT

The number and range of instructional resources in mathematics and science education can be overwhelming to educators. The chief mission of The Eisenhower National Clearinghouse for Mathematics and Science Education (ENC) is to help educators sort through the confusion by identifying relevant resources such as print materials, software, kits, and videos at the K-12 level. After locating the appropriate materials, educators then face a difficult question: "How should I choose among the materials that I have identified?". To help answer this question the SchoolNet Software Review Project (SSRP) has created an evaluation process, established a cadre of expert teacher evaluators throughout Ohio, and compiled a database of results. SSRP reviews software including CD-ROMs and laserdiscs for K-4 classrooms using protocols developed by teachers and SSRP staff. These protocols measure the quality of products in relation to current national and state of Ohio standards as well as in terms of the product's capacity to promote problem solving and inquiry. Four basic questions are devised for educators to ask as they assess how the software engages learning: (1) "What do students learn through the software?"; (2) "How do students learn with the software?"; (3) "What are the technical characteristics of the software?"; and (4) "What are the characteristics of the types of assessment provided by the software?". This report presents the results of the evaluation of 127 mathematics and science software programs. Thirty items were chosen to provide a balanced sampling of reviewed titles in terms of Average SSRP Score, price, and grade level and are presented by emphasizing their availability, an abstract describing the product, SSRP evaluators' comments, and system requirements. (ASK)

# enc FOCUS

For Mathematics and Science Education

## SSRP: Software for Problem Solving and Inquiry in Grades K-4

### Ohio SchoolNet

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### **Using ENC to learn more about software**

The Eisenhower National Clearinghouse for Mathematics and Science Education was established to help K–12 teachers locate useful teaching materials. The Clearinghouse collects all types of materials at the National Repository in Columbus, Ohio, at The Ohio State University. ENC makes information available about all of these resources in several ways. For example, this print catalog is one of a series that highlights specific topics and resources in math and science. All of ENC's resources in combination will provide comprehensive information for teachers on a variety of topics, including software.

### **ENC Online**

ENC Online has links to exemplary science and math Internet sites through the Digital Dozen, selected monthly, classroom links, and other educational resources. Some Internet sites are available with information about using software. You can find them in two ways: search Resource Finder, or browse through the links on ENC Online. If you have time to browse, you will find all kinds of things you might be able to use in your classroom. ENC Online also links to some of the full-text articles featured on ENC CDs.

### **ENC CDs**

ENC's CD-ROMs offer a variety of previously published documents in electronic format about curriculum issues in math and science education including curriculum support materials, state curriculum frameworks, and articles from professional journals. These documents cover curriculum standards and implementation, and include the complete 1989 *NCTM Curriculum and Evaluation Standards for School Mathematics*. These documents and other valuable materials are included on ENC's CD-ROMs, which are available free to schools.

### **ENC Demonstration Sites**

Located throughout the country, these 12 sites can be found at or work in conjunction with the 10 Eisenhower Regional Consortia (see inside back cover), at the Capital Collection & Demonstration Site at George Washington University in Washington, DC, and at ENC. Teachers and other educators can visit or contact the Site in their area for a complete demonstration of ENC's services as well as assistance in locating educational materials and using new technologies.

### **Teacher contributions to ENC**

To create a better service, ENC needs the help of the Nation's educators. ENC Online's newest tool, the Professional Development Exchange, offers one place where educators can both submit and search for professional development events and opportunities, such as workshops, conferences, or grant monies. However, this tool will only be useful if educators use and contribute to it. For more information, visit ENC Online at <<http://www.enc.org>>.

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# SSRP: Software for Problem Solving and Inquiry

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## **About ENC Focus**

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To request copies of any issue of the *Focus* series, contact ENC at the address above, or send e-mail to editor@enc.org. While some issues are out of print, all issues of this series are available online.

Past titles include *Real Data Resources for Teachers*, *Active Learning with Hands-on Resources*, *Integrating Math and Science*, *New Approaches to Assessment in Science and Mathematics*, and *Calculator-Active Materials*.

## **How to Connect to ENC Online**

To connect to ENC Online via the Internet, visit ENC's World Wide Web address at: <<http://www.enc.org>>. You can also telnet to enc.org; via modem dial (800) 362-4448 or (614) 292-9040. Set your communication software to VT100 terminal emulation, no parity, 8 data bits, 1 stop bit, and full duplex. Once connected, press <RETURN> to bring up a screen and type c to connect. All the information you need to use ENC is on the screen.

## **ENC Reference Services**

Teachers with questions about math or science curriculum resources can call the ENC reference staff. Reference services include locating suitable teaching materials, identifying Federally funded programs and opportunities, and making the best use of ENC's online services and Resource Finder. Call the Reference Desk at ENC's toll-free number or dial (614) 292-9734. Send e-mail questions to library@enc.org.

## **SchoolNet Initiatives**

The Ohio SchoolNet Initiatives—SchoolNet and SchoolNet Plus—are designed to provide network wiring to every K-12 school building in Ohio and one interactive workstation for every five children in grades K-4. Detailed information is available through the SchoolNet Web site at <<http://www.ohioschoolnet.k12.oh.us>>.

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# SSRP: Software for Problem Solving and Inquiry



etc.) at the K–12 level. After locating the appropriate materials, educators then face a difficult question: “How should I choose among the materials that I have identified?”

To help answer this question, the SchoolNet Software Review Project (SSRP) has created an evaluation process, established a cadre of expert teacher evaluators throughout Ohio, and compiled a database of results. SSRP reviews software, including CD-ROMs and laserdiscs, for K–4 classrooms, using protocols developed by teachers and SSRP staff. These protocols measure the quality of products in relation to current national and state of Ohio standards and in terms of the product’s capacity to promote problem solving and inquiry. In 1996, SSRP focused on science and mathematics software, with approximately 175 items now reviewed. This database can be accessed through the ENC Resource Finder by clicking on the link for the SchoolNet Software Review Project. It can also be accessed directly at URL: <<http://www.enc.org/rf/ssrp/>>.

SSRP is funded by Ohio SchoolNet and Ohio SchoolNet Plus, two major statewide initiatives to wire all classrooms and to place computers in K–4 classrooms. It began as an outgrowth of work with the Reynoldsburg Public School District, which is in an eastern suburb of Columbus, Ohio. Select faculty from the Reynoldsburg High School and Taylor Road Elementary School were invited to help develop a protocol for evaluating instructional software. A list of the participating faculty is on the front page of the modified instrument in this issue of *ENC Focus*.

**T**he number and range of instructional resources in mathematics and science education can be overwhelming to educators. The chief mission of ENC is to help educators sort through the confusion by identifying relevant resources (print materials, software, kits,

The faculty from Reynoldsburg began by studying a document called *Plugging In*, published jointly by the Council for Educational Development and Research (CEDaR) and the North Central Regional Educational Laboratory (Jones, Valdez, Nowakowski, & Rasmussen, 1995). *Plugging In* helps educators assess, in a systematic way, the extent to which technology is currently used in their schools to engage active and meaningful learning. It also aids them in creating a plan for moving toward even more powerful, learning-centered uses of technology.

Using *Plugging In* as a model, the Reynoldsburg faculty devised four basic questions for educators to ask as they assess how the software engages learning:

## **What do students learn through the software?**

Criteria here address the extent to which the software engages students in learning the powerful concepts and critical processes of a content area as identified in state and national standards.

## **How do students learn with the software?**

Criteria under this category consider how well software helps students learn the powerful concepts and critical processes of a content area by immersing them in sustained and meaningful problem solving, simulations, and real-life applications.

## **What are the technical characteristics of the software?**

Under this category, evaluators examine the extent to which the software provides adequate support for students and teachers to use or modify the product.

## **What are the characteristics of the types of assessment provided by the software?**

Criteria considered here determine the extent to which the software provides assessments that are ongoing and performance-based, as well as substantively correlated to applicable standards and seamlessly integrated into the broader learning process.

# SSRP: Software for Problem Solving and Inquiry

**A** draft of the protocol was finalized in early summer of 1996 and the Regional Professional Development Centers (RPDC) sent out the call for applicants to the summer institute. ENC selected 17 teacher leaders from among these applicants on the basis of their use of technology to engage meaningful learning in mathematics and science. The group met in August to use the protocol in evaluating K–4 mathematics and science software from the ENC collection.

SSRP was also seeking candidates who could assume leadership in providing professional development, since they would be called upon to conduct workshops in their own regions of Ohio after the summer institute. Most of these workshops are being conducted this spring. A list of these teachers and the schools where they work is provided here. Also provided is a shortened version of the protocol, called *Learning through Software*. The full version is available at the Web site mentioned on page 2.

This year, SSRP will expand and refine the protocol to apply not only to mathematics and science, but also to language arts and social studies. This second-generation protocol is being developed in collaboration with a group of educators and teacher educators from the Columbus area and The Ohio State University, hosted and facilitated by the Instructional Technology Services of Central Ohio. An external review of this draft protocol will be conducted by a national group of experts and practitioners. SSRP will then repeat the cycle above for language arts and social studies.

There is a pressing need to pool, in one location, the collective wisdom of educators about the effectiveness of various software titles that provide rich, problem-solving environments structured around critical concepts and processes. And, as educators are asked increasingly to integrate technology into their classrooms, they need evaluative information that will help them make intelligent, learning-driven decisions about software purchases. The SSRP database is an important step in responding to these needs.

## SSRP Evaluators and School Affiliations

<b>Lee Morgan Sattlemeyer</b>	Lomond Elementary (Shaker Heights)
<b>Susan K. Robinson</b>	WBGU Public TV (Bowling Green)
<b>Penny L. Dilley</b>	Cambridge City Schools (Cambridge)
<b>Kristal A. Seagraves</b>	Monroe Elementary (London)
<b>Pam Styles</b>	Meadowdale Elementary (Dayton)
<b>Lois S. Klamar</b>	Jamison CompuTech Center (Cleveland)
<b>Kristine K. Dobbelaere</b>	Oakwood Elementary (Oakwood)
<b>Mary W. Cruser</b>	Ohio Valley Educational Service Center (West Union)
<b>Michelle Kendrick-Curtis</b>	Frazeburg Elementary (Frazeburg)
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<b>Kay A. Deitchel</b>	Scioto County Edu- cational Service Center (Portsmouth)
<b>Debra Rucker</b>	Upper Arlington School District (Upper Arlington)
<b>Brenda F. Profit</b>	Jamison CompuTech Center (Cleveland)
<b>Mary B. Robinson</b>	Perry Elementary (Zanesville)
<b>Bonniejean Meyer</b>	Tremont Elementary (Cleveland)
<b>Dawn Tufto</b>	Taylor Road Elementary (Reynoldsburg)
<b>Susan Dackin</b>	Taylor Road Elementary (Reynoldsburg)

## Ohio SchoolNet Plus Learning through Software

*A Software Evaluation Protocol Designed for Teachers by Teachers*

### Background and History

This protocol was developed by teachers of the Reynoldsburg City School District, Reynoldsburg, Ohio. Reynoldsburg High School faculty included: David Baker, Mathematics Teacher; Charles Brads, Mathematics Teacher; Steve Dackin, Principal; and Richard Ladowitz, Biology Teacher.

Taylor Road Elementary School faculty included: Susan Dackin, 1st grade Teacher; Marlie Griffin, Special Education Teacher; Wayne Kanzigg, 3rd grade Teacher; and Dawn Tufto, 4th grade Teacher.

Additional assistance was provided by: Deborah Bergeron, Principal, Taylor Road Elementary School; William Gathergood, English Teacher, Reynoldsburg High School; and Lanna Trimmer, Kindergarten Teacher, Taylor Road Elementary School.

*Project Coordinator:* Todd Fennimore, Eisenhower National Clearinghouse.

To make best use of this protocol, it is important to be familiar with and make reference to the appropriate national and state standards and guidelines in mathematics and science. In mathematics, you should refer to the *Curriculum and Evaluation Standards for School Mathematics* (1989) from the National Council of Teachers of Mathematics and the *Model Competency-Based Mathematics Program* (1990) from the Ohio Department of Education. In science, you should refer to the *National Science Education Standards* (1995) from the National Research Council and *Ohio's Model Competency-Based Program* (1994) from the Ohio Department of Education.

### Purpose of the Protocol

This protocol was designed to assess the extent to which instructional math and science software engages students in meaningful and sustained problem solving and inquiry around critical concepts and thought processes. The term "software" includes CD-ROMs and laserdiscs. To fully understand the intent of the protocol, it is important to realize what this protocol was not designed to do:

1. It was not designed to evaluate the educational effectiveness of software not aimed explicitly at achieving particular, well-defined instructional objectives. For example, the protocol does not

cover multimedia CD-ROMs that are meant to be used primarily as general reference, nor does it address spreadsheet applications, databases or graphing utilities that are basically productivity tools. Future protocol development efforts will encompass these other tools.

2. The protocol does not yield favorable scores for instructional software that is not oriented to problem solving and inquiry. This means that software that is primarily aimed at drill and practice in basic computation or at memorizing discrete facts will not obtain a high score. As another example, many new CD-ROMs are very entertaining, have high-production quality, and are presented in esthetically pleasing multimedia formats, but have very little correlation with the national or state content standards and do not engage students in serious thinking.

3. The average scores on the software titles are the averages of the averages for each applicable area. In cases where assessment is built into the program, the score includes the areas of content, instructional method, technical characteristics, and assessment. In cases where assessment is not built in, only the average of the first three scores is taken. Teacher evaluators found that there were often titles they felt were powerful in engaging active and meaningful learning, but did not build in assessment. They often said they were more comfortable doing assessment themselves and so did not mind that assessments were not built into the software. They made notes to this effect in their open-ended comments.

## How to Use This Protocol

The protocol is divided into three parts:

**Part I:** Software Profile; **Part II:** Evaluator Profile; and **Part III:** Software Evaluation.

Parts I and II are not presented here to save space, but a complete protocol can be obtained at the ENC Web site (<http://www.enc.org/rf/ssrp>). The Software Profile specifies the content covered, the primary purposes of the software, and sensitivity to equity issues (e.g., gender fairness, "friendly" design for students with impairments). The Evaluator Profile indicates whether the evaluation was filled out by a group or individual. It also indicates their roles and the data they used for evaluation. The Software Evaluation section is presented in its entirety, with the exception of the first question under the category: "What do students learn through the software?" This question asks teachers to correlate the content of the software with all of the relevant standards that they must meet (e.g., national, state, district, building). Each category has an average score calculated, and these averages are averaged for a general score. It is often useful to consider the degree of alignment of the software with content standards (the first question under the first category) as a separate score. See the summary sheets in the back of this issue of *ENC Focus* for an example.

## Ohio SchoolNet Plus Software Evaluation Protocol

### Part III: Software Evaluation

#### A. What do students learn through the software?

##### 2. To what extent does the software present accurate and up-to-date information?

1	2	3	4	5
Information is generally inaccurate or out-of-date.	Information is inaccurate or out-of-date more often than not.	Information is occasionally inaccurate and out-of-date.	Information is accurate and current, with a few exceptions.	Information is accurate and current.

##### 3. To what extent does the software allow students to choose among challenging options with multiple solution paths?

1	2	3	4	5
Only simple tasks with one solution option are provided (e.g., one-step computation, recall of isolated fact).	Tasks presented are relatively simple, though a few demand more than one step to accomplish.	Some problems are moderately challenging and offer more than one solution path.	Several opportunities are provided to pursue relatively challenging problems with different solution strategies.	Many challenging problems with multiple solution paths are provided as options to students.

##### 4. To what extent does the software make connections among concepts and/or across disciplines?

1	2	3	4	5
Focus is on discrete concepts confined to one topic area.	Occasional, rather superficial mentions made to connections with other concepts and/or disciplines.	In some instances, several concepts are connected and/or multidisciplinary perspectives used.	Meaningful connections are made among many of the concepts or disciplines presented.	Strong connections are made among multiple concepts and across multiple disciplines.

##### 5. To what extent does the software use problem-solving processes to help students build their conceptual understanding?

1	2	3	4	5
Focus is on drill and practice and/or skill development.	Carefully structured problems are used to learn isolated facts and procedures.	Well-defined problems focus on mid-level concepts.	Some problems require an understanding of broad concepts to interpret and address them.	Open-ended problem solving processes are used to discover and explore higher level concepts.

##### 6. To what extent does the software present concepts in context and in a clear and understandable manner?

1	2	3	4	5
Concepts are unclear and presented out of context.	Many concepts are defined in inappropriate or vague terms and outside of a meaningful context.	Concepts presented in an accurate, factual manner with little or no context.	Concepts presented in accessible, everyday language with some apt examples to set a context for their use.	Concepts are clear and well-defined and presented within a rich, relevant, and motivating context.

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## 7. To what extent does the package present concepts in a manner that facilitates their transfer to other contexts such as written work, classroom activities, and projects?

1	2	3	4	5
Concepts do not transfer; concepts encountered by students in the software are not reflected in other work.	Concepts transfer to some limited learning contexts given a great deal of assistance by the teacher.	The software presents concepts in ways that aid in some transfer to different learning contexts.	Students often use the concepts that they learn in working with the software in other classroom work.	Concepts transfer fluently to a diversity of learning contexts.

## B. How do students learn with the software?

### 1. To what extent does the software present authentic problems to be solved?

1	2	3	4	5
No problems are presented or problems are contrived and do not reflect real-life situations.	Some problems make reference to real-life situations or applications.	Problems are based on real-life situations but are constrained due to approaches built into the software.	Problems are based on real-life situations and allow some different approaches to solutions.	Problems are based on real-life situations and evoke varied and thoughtful approaches to solutions.

### 2. To what extent does the software allow for varied approaches to learning (linguistic, logical-mathematical, spatial, musical, etc.)?

1	2	3	4	5
Software follows one approach to learning (e.g., text only).	Software relies largely on one approach, but occasionally enriches this with other approaches.	Software effectively uses some varied approaches to learning.	Software engages students in many different approaches to learning.	Software uses a wide diversity of approaches in helping students learn any given concept or thought process.

### 3. To what extent does the software motivate and enable the student to construct his or her own model or simulation in the course of problem solving?

1	2	3	4	5
Students are not given the opportunity to develop models or simulations.	Some use of models or simulations is made, but little or no opportunity is provided for modification or experimentation.	Students are allowed some flexibility in developing or modifying limited models or simulations generated by the software.	Extensive use of models or simulations, with meaningful opportunities to modify or experiment with these models or simulations.	Students are given tools and support for designing models or simulations to solve problems on their own.

### 4. To what extent does the software engage students in inquiry around open-ended problems?

1	2	3	4	5
No opportunities for open-ended inquiry are provided.	Questions or problems are presented, but they usually only involve retrieving facts or doing simple computation.	Engagement occurs through solving well-defined, but moderately challenging problems in step-by-step fashion.	Engagement occurs through solving some problems requiring interpretation and a plan of attack.	Engagement largely occurs through a sustained inquiry process using significant concepts.

### 5. To what extent does the software enable students to link concepts in a meaningful sequence while conducting inquiry?

1	2	3	4	5
Primary focus is on skills and facts with little or no meaningful sequence.	Some sequencing of facts and skills occurs, as in a movement from simple to complex tasks in a particular skill domain.	Concepts are approached as a carefully structured sequence of skills and facts with minimal self-directed inquiry required of students.	Students have opportunities to direct their own inquiry, making some meaningful linkages among concepts while conducting that inquiry.	Concepts are explored through open-ended inquiry processes that allow for discovery of connections among concepts, skills, and facts.

### 6. To what extent does the software encourage and support collaborative learning?

1	2	3	4	5
Software designed to be used individually.	The teacher can use the software with some group activities with effort and/or adaptation.	Software allows for cooperation among students on well-structured tasks.	Software allows some support and encouragement in defining and acting out roles in a collaborative group.	Software supports extensive and sustained collaboration among students in open-ended problem solving.

### 7. To what extent does the software allow for the student to review a previous section of the program as needed?

1	2	3	4	5
Software does not allow students to review and/or redo prior work.	Students can review and/or redo prior work only with effort.	Software allows students only limited review and/or revision of prior work.	Many opportunities are provided for review and/or revision of prior work.	Software allows extensive review and/or revision of prior work as needed.

### 8. To what extent does the software encourage the student to assume the role of a self-directed learner?

1	2	3	4	5
Software promotes only teacher-directed learning with students as passive recipients of information.	Software largely structures and directs learning, with a few opportunities for student response.	Software employs some student-directed learning, but teacher remains in the role of director and authority.	Software relies greatly on student-directed learning, encouraging teachers to move toward roles as facilitators of learning.	Software promotes student-directed learning while requiring teachers to assume role of co-investigator, facilitator, and mentor.

## C. What are the technical characteristics of the software?

### 1. To what extent does the system provide security for the sections of the software designed for teacher use, which contain personal information about students, or which contain assessment information?

1	2	3	4	5
No security is provided for sections of the software intended for teachers only or security is easily breached.	With minimal effort, student could access teacher-only information or otherwise breach the software's security.	Modest security is provided but the security could be overcome by a determined student.	Adequate security is provided for most purposes; very few students could overcome the security provisions.	Security systems provided are highly effective and cannot be overcome by students.

### 2. To what extent does the system respond well to student errors or intentional attempts to disrupt software operation?

1	2	3	4	5
Software can easily be disrupted by and recovers poorly from student errors or intentional attempts to disrupt operation.	Software can be sensitive to some types of student error or vulnerable to disruption in certain operations.	Software can be disrupted with some effort, but in general is tolerant of student errors and intentional attempts to disrupt operation.	Software can be disrupted only with significant and usually intentional efforts by students.	Software cannot be disrupted by student errors or attempts to disrupt software operation.

### 3. To what extent can students learn to use the software on their own?

1	2	3	4	5
Students cannot use the program without direct assistance from the teacher or others.	Students spend an inordinate amount of time learning how to use software and frequently require help from the teacher or others.	Students can use software relying primarily on included help and documentation with occasional assistance from the teacher or others.	Students can customarily use program independently, making use of documentation, needing help with infrequent difficulties.	Students can use the program independently, making use of provided help, documentation, and built-in assistance with troubleshooting.

### 4. To what extent does the software provide for intelligent feedback adapted to the student needs?

1	2	3	4	5
Little or no feedback is provided.	Minimal feedback is given about whether a response is correct or incorrect or a task is completed or unfinished.	Feedback provides limited explanations of possible sources of error when errors occur.	Feedback provides good information to students about likely sources of difficulty in learning a particular content.	Feedback analyzes student misconceptions and difficulties when problem solving is unsuccessful.

### 5. To what extent does the software effectively use multimedia (sound, graphics, video, etc.)?

1	2	3	4	5
Multimedia is not employed or is not relevant to the task undertaken.	Multimedia is employed, but is primarily used for diversion, entertainment, or reward.	Multimedia is employed and of interest, but is not critical to the learning of content.	Multimedia is used appropriately to enrich and enliven the content to be learned.	Multimedia approaches are creatively employed and integrated as critical elements of the learning experience.

### 6. To what extent does the software integrate tools into the program that allow students to collect, analyze, and manipulate data?

1	2	3	4	5
No tools are provided or the tools that are provided do not function well.	Only a couple of tools are provided and they function poorly or in a very limited way.	Some tools are provided and generally function in an appropriate fashion.	Many tools are available and can be accessed at certain times. Suggestions for their use are provided.	Extensive tools are fully accessible at all times and their use is thoroughly and effectively integrated into program.

### 7. To what extent does the software have a high level of interactivity?

1	2	3	4	5
Software requires little or no interaction by students.	Software may provide some game-like interaction, but with little thoughtful response.	Software requires occasional input by students, but generally requires only simple, though learning-oriented, responses.	Software regularly requires students to make extended responses based on their learning.	Software requires substantial and frequent thoughtful input from students.

### 8. To what extent does the software integrate assessment throughout the program?

1	2	3	4	5
Assessment is not present.	Assessment is sporadic, with little or no focus on significant learning.	Assessment appears only at defined points in the instruction, but is keyed to most important, expected learning.	Assessment is frequent, and ties to what was learned and what will be learned are made strategically.	Assessment is ongoing, and thoroughly and seamlessly integrated with the instructional aspects of the software.

### 9. To what extent does the software allow the teacher to modify the software parameters (set difficulty levels, input word lists, etc.) for use with diverse students?

1	2	3	4	5
Teacher cannot modify software parameters, or modification is too difficult technically.	Teacher can modify some parameters, or the modifications that can be made require considerable effort.	Only limited teacher modifications are available, or modification requires some effort.	A wide range of software parameters can be easily modified.	Teacher can easily and extensively modify the software parameters.

# SSRP: Software for Problem Solving and Inquiry

**10. To what extent does the grade level reported by the software publisher accurately reflect the grade level at which the software should be used?**

1	2	3	4	5
The grade levels reported by the publisher appear to be inaccurate.	The grade levels reported by the publisher are true for only some of the grade levels.	The grade levels reported are appropriate.	The grade levels reported are appropriate, but software could be used for a wider range of grade levels.	The grade levels reported are appropriate, but software could be used flexibly for students at any ability/grade levels.

**At what grade levels would it be most appropriate to use this software? (circle all that apply):**

Pre K   K   1   2   3   4   5   6   7   8   9   10   11   12

**11. To what extent does the software contain informative and useful help features?**

1	2	3	4	5
Little or no help is provided, or the help which is provided is of little use.	Some help is provided on major or very basic software operations, or the help provided is of limited scope.	Adequate help is provided for the general user.	Ample help is provided, with some assistance in troubleshooting, a tutorial, and help for specific operations.	Extensive help is provided, including such supports as examples, templates, cross referencing and topic linking.

**12. To what extent does the software have an easy installation process?**

1	2	3	4	5
Installation was difficult and confusing, and/or was unsuccessful on one or more attempts.	Installation was difficult but successful, given the time to understand difficult or vague instructions.	Installation was moderately easy with adequate instructions provided.	Installation was very easy, with clear instructions provided.	Little effort was needed to install the package; the user is guided by the software.

**13. To what extent does this package provide effective teaching and learning guides to help teachers integrate the software into the curriculum?**

1	2	3	4	5
No guides are provided, or guides provided are ineffective.	Some guides are provided, though they are of minimal help or use.	Moderately effective guides are provided.	Guides are effective in helping teachers integrate the software into the curriculum.	Highly effective guides provide extensive and high quality resources for integration.

**D. What are the characteristics of the types of assessments provided by the software? (Note: Leave blank if no assessment is provided)**

**1. To what extent do the assessments offered identify areas where further student development is needed and suggest paths for further development?**

1	2	3	4	5
Software provides little or no assessment to aid student development.	Software provides some summative feedback on student performance, but no clear and comprehensive identification of areas of difficulty.	Software identifies areas for further development but offers no means for obtaining that development.	Software identifies areas for further development and makes some suggestions for obtaining that development.	Software identifies areas where further development is needed and provides activities or other means for obtaining that development.



# SSRP: Software for Problem Solving and Inquiry

## 2. To what extent does the assessment correlate with the learning objectives of the software?

1	2	3	4	5
There is little or no correlation between assessment and learning objectives.	There is a weak correlation between the assessments provided and the learning objectives.	The assessment provided represents some of the learning objectives.	A substantial number of the most important learning objectives are measured by the assessment.	The assessment represents most or all of the learning objectives.

## 3. To what extent does the software support performance-based assessment by allowing students to demonstrate their knowledge using tools to gather, present, and interpret data?

1	2	3	4	5
Software provides no such tools.	Software provides minimal tools for performance-based assessment; most tools are used for preprogrammed responses.	Software provides tools that can only be used with data generated by the software.	Software allows for some opportunity for students to gather, present, and interpret their own data in their own way.	Software provides tools that can be used with data both generated by the software and independently by students.

## 4. To what extent does the software adapt itself to the skill level of the student?

1	2	3	4	5
Only a set path is provided based on student skills.	There are a couple of opportunities to adjust level of difficulty.	Some flexibility in movement through the program is based on student skills.	Some alternate pathways are provided based on student skills.	Many alternate pathways are provided based on student skills.

## 5. To what extent does the software help students and teachers monitor and track student learning?

1	2	3	4	5
No monitoring or record-keeping provided.	Limited records are kept on student progress for teacher use only.	Full records are kept on student progress for teacher use only.	There are frequent opportunities for both students and teachers to track and monitor learning.	Students and teachers both can track and monitor student learning on an ongoing basis.

## 6. To what extent does the software accurately begin the student at his or her current level of understanding and skill and allow flexibility for the student?

1	2	3	4	5
The same starting point is provided for all students.	The software has some rather imprecise global levels of difficulty that the teacher or student can choose when beginning to use the software.	The student is placed at an appropriate level by the software without providing the student an opportunity to start at different points.	Software bases the starting point in the program for the student on an initial assessment, and the student has some freedom in modifying that level.	Software starts student at an appropriate level given their understanding and skill with the student having the option of adjusting that level or point of entry.

## E. Summary Comments

Please provide a brief statement of the strengths and weaknesses you see in this software product. Focus your comments on things that you feel would assist another teacher in determining if this package is right for use in their class with their students. Also, if you have used this software with students, please share your experiences here. Use the back of this page as necessary.

# SSRP: Software for Problem Solving and Inquiry

Featured items were chosen to provide a balanced sampling of reviewed titles in terms of Average SSRP Score, price, and grade level. For the full list of software reviewed, please see page 44.

Title	Content	Learning Approach	Technical Approach	Assessment	Number of Standards Addressed	Average Level of Alignment (out of 5)	Average SSRP Score (out of 5)	Price *	Grade Level	Page No.
<b>Math Software</b>										
Unlocking Probability, Volume 2	5	5	4	4	4	5	<b>4.50</b>	\$99.00	4	14
The Logic Box: Software for All Ages	4	3	4	4	6	4	<b>3.75</b>	\$70.00	K-12	15
Math for Everyday Living	4	4	4	2	10	4.7	<b>3.50</b>	\$129.00	3-6	16
Math Problem Solver, Level 4	4	3	4	2	30	3.35	<b>3.25</b>	\$69.95	4	17
Becoming Successful Problem Solvers: Club Photos, Set 2	5	5	3	n/a	10	5	<b>4.33</b>	\$329.00	4-7	18
Thinkin' Things Collection I	5	3	4	n/a	6	3	<b>4.00</b>	\$59.95	PreK-4	19
The Graph Club with Fizz and Martina	5	3	4	n/a	8	5	<b>4.00</b>	\$99.95	K-4	20
Magic Bear's Masterpieces: A Mathemagical Adventure in Art and Geometry	4	3	4	n/a	9	4.44	<b>3.66</b>	\$29.95	PreK-4	21
Puzzle Tanks	4	3	3	n/a	2	4	<b>3.33</b>	\$79.95	3-8	22
Math Shop Spotlight: Weights and Measures	4	3	3	n/a	18	3.69	<b>3.33</b>	\$74.95	4-8	23
<b>Science Software</b>										
Zurk's Alaskan Trek	5	5	4	4	5	4	<b>4.50</b>	\$44.95	1-5	24
Feed Me! Investigating the Needs of Living Things, 1st ed., Level III	5	5	4	n/a	16	4.12	<b>4.66</b>	\$395.00	K	25
Destination: Rain Forest	5	5	4	n/a	3	3.79	<b>4.66</b>	\$39.95	K-6	26
Gizmos & Gadgets	4	5	4	n/a	4	5	<b>4.33</b>	\$29.95	3-6	27
Weather in Action	5	5	3	n/a	25	4.45	<b>4.33</b>	\$490.00	4-6	28

\* Please see record for details. Pricing and ordering information were verified in February of 1997 and are subject to change.

# SSRP: Software for Problem Solving and Inquiry

Title	Content	Learning Approach	Technical Approach	Assessment	Number of Standards Addressed	Average Level of Alignment (out of 5)	Average SSRP Score (out of 5)	Price *	Grade Level	Page No.
<b>Science Software (cont'd)</b>										
Wolves	3	3	3	4	3	3	<b>3.25</b>	\$75.00	1-6	29
Aviation Adventure	5	5	3	n/a	8	4	<b>4.33</b>	\$9.95	3-12	30
Thinking Like a Scientist: Process Skills and Critical Thinking	4	3	3	2	4	4	<b>3.00</b>	\$169.00	4-6	31
Mystery Matter	3	2	4	2	7	3.14	<b>2.75</b>	\$34.95	3-8	32
Radar Rooster Presents Fowl Weather	3	5	3	0	2	4.5	<b>3.66</b>	\$18.95	PreK-3	33
<b>Interdisciplinary/Integrated Math and Science Software</b>										
Sciences I	5	5	4	4	13	4.76	<b>4.50</b>	\$99.00	4-12	34
Wood Car Rally	5	3	4	4	18	4.55	<b>4.00</b>	\$34.95	3-8	35
Whales and Their Environment	5	4	3	2	4	4.5	<b>3.50</b>	\$495.00	4-8	36
Too Much Trash?	5	5	4	n/a	12	4.33	<b>4.66</b>	\$440.00	4-6	37
What's the Secret? Volume 2	5	5	4	n/a	19	4.79	<b>4.66</b>	\$29.95	3-12	38
Acid Rain	5	5	4	n/a	17	4.64	<b>4.66</b>	\$490.00	4-6	39
Kids and the Environment	5	5	3	1	5	3.39	<b>3.50</b>	\$99.95	2-6	40
The Even More Incredible Machine	5	4	3	n/a	14	4.21	<b>4.00</b>	\$34.95	4-8	41
DinoPark Tycoon	5	2	4	n/a	4	2.5	<b>3.66</b>	\$49.95	4-12	42
Mystery Objects	4	3	3	n/a	9	4.11	<b>3.33</b>	\$34.95	2-4	43

\* Please see record for details. Pricing and ordering information were verified in February of 1997 and are subject to change.

## Unlocking Probability Volume 2

Series: MathKeys  
1994

Grade 4



Average SSRP Score: 4.50

### Availability

MECC (distributor)  
6160 Summit Drive North  
Minneapolis, MN 55430-4003  
Telephone no.: (612) 569-1690  
Toll-free no.: (800) 685-6322, ext. 788  
Fax no.: (612) 569-1755  
Also available from Houghton Mifflin  
Telephone no.: (800) 733-2828.

### This software can be used for:

Remediation/review; Drill and practice; Standard instruction;  
Tutorial; Enrichment; Assessment; Game; Collaborative projects;  
Problem solving

### Software package:

Order no.: MK-904 63-6 \$99.00

Note: Contact MECC or Houghton Mifflin about other ordering options.

### Abstract

This software package allows students to explore mathematics in a multimedia environment and to make the connection between physical objects and abstract mathematical concepts. It provides 22 activities that link simulated manipulatives, symbolic notation, and writing tools so that students can learn to think and communicate mathematically. Simulated machines, such as the coin and spinner machines, randomly generate a specified number of trials. For example, the coin machine randomly generates coin flips for the number of trials specified. Each machine uses from one to five coins, numbers, spinners, or symbols for anywhere from one to one hundred thousand trials per run. Collective runs or individual outcomes may be graphed and results may be displayed as a number or a percent. Users may define a successful trial on each machine in terms of the number of potential combinations, but they also have the option of not specifying any requirements. For example, a successful trial may be defined as at least two heads in the coin machine. In the teacher resource guide, assessment suggestions are designed to reflect the belief that mathematical thinking is best evaluated through a variety of measures, such as assessing student writing and reviewing student performance. The guide also presents lesson variations, extension activities, and suggestions for reflecting and sharing the results. English and Spanish blackline masters are provided for the user guide and student activities, along with a training videocassette. This software is designed to support the NCTM goals by providing open-ended tools and curriculum materials that enable students to construct meaning from their experiences.  
(Author/LDR)

### SSRP Evaluators' Comments

Really good software for exploring probability. We previewed the entire bundle and the introductory video provides excellent guidance for incorporating this software in your math program. Even though this is a Houghton Mifflin product, it could be incorporated into any mathematics program.

### System Requirements

Macintosh: Macintosh LC or later; 2MB RAM; System 7; 32 bit Quickdraw; color monitor. If you intend to install this on a file server, you need to be connected to an AppleShare file server via AppleTalk/LocalTalk or EtherNet (EtherNet cabling recommended)

### Reference No.

ENC-002739

# The Logic Box: Software for All Ages

1993

Grades K-12

WARE  
SOFT

Average SSRP Score: 3.75

## Availability

PC Resources (distributor in U.S.)  
11621 Hunters Green Court  
Reston, VA 20191

Telephone no.: (703) 860-1100

Fax no.: (703) 860-4529

ENC has only English version of software, but has English, French, and Spanish versions of manual.

## This software can be used for:

Enrichment; Game; Problem solving

## 1 software package:

\$70.00 [specify English, French, or Spanish language].

Note: Special educator prices available.

## Abstract

*This software game is designed to develop problem solving, logic, and critical thinking skills. It is based on the Keep Add Exchange game invented by Dr. Zoltan P. Dienes, whose research and writing have focused on the psychology of learning, specifically in mathematics. The game is played with eight objects and three operations. The eight objects can be words, numbers, pictures, or shapes, and represent all possible combinations of three attributes: shape, color, and size. For example, if the objects are plane figures, they could be circle or square, red or blue, and small or large. Objects are moved in and out of a box using the three operations of adding an object, keeping an object, and exchanging objects. First one specific attribute is selected, such as blue, and then an operation is chosen and applied to all objects with that particular attribute, in this case causing all blue objects to move in or out of the box. The objective of the game is to take as few steps as possible in moving a selected set of objects into the box, leaving all others out. The user can select problems of varying degrees of difficulty. Also included are suggestions for classroom use and for extending the applications of this program. French and Spanish versions are available. (Author/DDD)*

## SSRP Evaluators' Comments

While the levels indicated are K-12, this program may be frustrating for some primary students. For these students, some direct teacher instruction would be necessary. Even though small group use was indicated, it is recommended that only one or two students at a time use the software. We feel that this is an excellent logic program that would be a good purchase for use at all grade levels.

## Publisher

Scotia Com Systems [Centerville, Nova Scotia, Canada]

## System Requirements

Macintosh: System 6.0.7 or later

## Reference No.

ENC-002732

# Math for Everyday Living

Grades 3-6

WARE

S  
O  
F  
T

Series: *Technology-Based Solutions*

1994

Average SSRP Score: 3.50

## Availability

Educational Activities, Inc.  
1937 Grand Avenue  
Baldwin, NY 11510  
Telephone no.: (516) 223-4666  
Toll-free no.: (800) 645-3739  
Fax no.: (516) 623-9282

## *This software can be used for:*

Drill and practice; Standard instruction; Tutorial

## *! software package:*

Order no.: DK-158DIM \$129.00

Note: Contact publisher for additional package information.

## Abstract

*This software package gives students the opportunity to practice using basic mathematics through simulations of everyday activities, such as paying for a meal or working with sales slips. Designed for students in developmental math and remedial math, as well as for secondary and basic education students who have a reading level of grades 4-6, the software targets the development of consumer mathematics and business skills. The simulation activities change to specific tutorials if students cannot complete the problem correctly in a given number of attempts. These tutorials guide students step by step through correct problem-solving procedures. A typical lesson begins by displaying an item students might encounter in everyday life, such as a pay stub. Using these objects, students gain practical experience and skills such as calculating gross pay. Topics include unit pricing, which covers beginning multiplication, and sales tax, which gives students the opportunity to work with percents. In another lesson, students learn advanced multiplication through the simulation of finding a job. The program gives students the chance to work with time, determine how to save on transportation costs, and calculate net pay. Students are expected to work out their answers with paper and pencil before entering them into the computer. A management system is provided to track student performance. The manual includes ten reproducible activity masters to reinforce concepts, a pretest and a posttest for diagnostic evaluation, and answer keys for the activities and tests. (Author/GMM)*

## SSRP Evaluators' Comments

This software uses real-life situations as it takes the students through a series of problems that use basic operations. There is an assessment feature that allows teachers to track the progress of the students. The graphics only use a small portion of the screen. Each level must be completed before the students can exit the program. When students choose to exit, the program will return to the same place when they reenter it.

## System Requirements

Macintosh: at least 2MB RAM available; color monitor

## Reference No.

ENC-003986

# Math Problem Solver Level 4

Grade 4

SOFTWARE

Series: Math Problem Solver  
1995

Average SSRP Score: 3.25

## Availability

Curriculum Associates, Inc.  
5 Esquire Road  
North Billerica, MA 01862-9987  
Telephone no.: (508) 667-8000  
Toll-free no.: (800) 225-0248  
Fax no.: (508) 667-5706  
ENC has Macintosh version only.

## This software can be used for:

Remediation/review; Drill and practice; Standard instruction; Tutorial; Information retrieval/resource; Instructional management; Problem solving; Demonstration

## 1 software package:

\$69.95 (Specify level number)

## 1 complete set (levels 3–8):

\$377.70

## Abstract

This software package is Level 4 of a six-level series intended as a learning tool for mathematics instruction. Each level features material from six major topics: data interpretation, numeration, measurement, geometry, number theory, and prealgebra or algebra. For example, one of the measurement sections in this package asks students to choose appropriate units, while in another students read clocks and measure their perimeter. When students give an incorrect answer, they revisit the problem in a three-step process, each with a selection of multiple-choice questions. As they progress, students type in their own answers. Each unit ends by giving students an opportunity to create their own problems and test the knowledge of their partners or instructor. Student data, such as the number of sections that have been completed, is recorded throughout the program. The teacher's guide provides installation instructions, a chart listing the concepts of each of the major sections, and an overview of the program. (Author/MPN/DDD)

## SSRP Evaluators' Comments

This software guides students through the problem-solving process. The software provides an excellent review and practice for the 4th grade proficiency test. We recommend it for all 4th grade classrooms. Fifth grade teachers can use it for remediation, since by law teachers are required to remediate students who do not pass the test. This program can be used in grades 4–8 depending on the ability of students. It would also be helpful for students who are new to districts and haven't had practice for the test. In the version we reviewed, we found three bugs in the program but would still purchase it. We were told a new version is available.

## System Requirements

Macintosh: Macintosh LC or better; System 6.0.7 or higher; 4MB RAM; 2.5MB hard disk space (for each level loaded); 3.5" high density floppy drive  
DOS or Windows: 386SX (486SX recommended); monitor with VGA or better; DOS 3.3 or higher; Windows 3.1 or higher; 4MB RAM; 3MB hard disk space (for each level loaded); 3.5" high density floppy drive

## Reference No.

ENC-003022

# Becoming Successful Problem Solvers: Club Photos, Set 2

1991-1993

Grades 4-7



Average SSRP Score: 4.33

## Availability

Human Relations Media (HRM)  
175 Tompkins Avenue  
Pleasantville, NY 10570  
Toll-free no.: (800) 431-2050  
Fax no.: (914) 747-1744

## This software can be used for:

Problem solving; Collaborative projects; Enrichment; Instructional management; Standard instruction

## 1 laserdisc kit:

Order no.: KX-970-LD; ISBN 1-55548-543-X \$329.00

## 1 video kit:

Order no.: KX-970-VS; ISBN 1-55548-543-X \$175.00

## Abstract

*This laserdisc kit explores students' attitudes and beliefs about mathematics, presenting them with problems based on real-world situations. The situations or episodes cover a wide range of mathematical content, including arithmetic, geometry, and statistics. The disc contains four episodes, each of which has two parts and concludes with a series of questions relating to the conversation between the participants. The first episode, The Basketball Gadget, emphasizes statistics and probability. It describes the marble-shooting basketball machine that Sonya has invented and asks students to help determine its accuracy. The second and third episodes cover the concepts of numbers and basic geometry. In Club Photos, students determine how many 3" x 5" photos will fit into a 14" x 21" frame. In the third episode, Growing Gold, Michael seems to create a rectangle bigger than the gold square from which he cut the pieces, and students are asked to figure out how this could happen. The fourth episode, Cutting up Carpet, emphasizes geometry and measurement concepts. In order to cover the floor of an irregularly shaped room, Lisa and Stacey need to determine how many yards of carpet to buy from a 10' wide roll. The kit includes a Laserdisc Navigator that allows students to retrace their steps and look for hints throughout each episode. The teacher's guide contains reproducible worksheets to help students step through the problems, as well as optional worksheets to teach and review important concepts and extend student understanding. The guide also provides teaching suggestions, solutions to the laserdisc problems, and answers for all the worksheets. The materials in this kit were designed with the NCTM's Curriculum and Evaluation Standards for School Mathematics (1989) in mind. The kit is also available in videotape format. (Author/LDR/KSR)*

## SSRP Evaluators' Comments

This is great software to promote open-ended problem solving. The program is user friendly. This would be an excellent place to begin inquiry-based education in the classroom. The program incorporates the NCTM standards of reasoning, communications, connections, and problem solving.

## Equipment

Laserdisc player and color monitor; barcode reader or remote control

## Reference No.

ENC-007231

# Thinkin' Things Collection I

Grades PreK-4

CD ROM



Series: Thinkin' Things  
1995

Average SSRP Score: 4.00

## Availability

Edmark Corporation  
6727 185th Avenue NE  
Redmond, WA 980523  
Toll-free no.: (800) 426-0856  
Fax: (206) 556-8430

## This software can be used for:

Simulation; Enrichment; Multiple intelligence; Demonstration

## I CD-ROM:

Order no.: 701-1176 \$59.95

Note: The above price reflects an educator's discount and includes teacher's guide.

## Abstract

*This CD-ROM offers six activities that emphasize a variety of thinking skills, such as memory, critical thinking, problem solving, and creativity. The Create mode allows students to experiment, explore, and create, while the Question and Answer mode gives students a chance to answer a character's questions. In the activity Oranga Banga, students become familiar with the sounds of a variety of instruments and then try to repeat the patterns they hear. The Fripple Shop gives students the opportunity to explore Boolean logic and develop skill in observing details. It also allows teachers and parents to observe how individual students learn. In BLOX-Flying Spheres, students explore the concept of depth and conduct experiments involving motion. In BLOX-Flying Shapes, geometric shapes, motion, and sound are used to develop student awareness of spatial relationships, demonstrating the differences and similarities in shape. Feathered Friends teaches students how to recognize, compare, and combine attributes and how to use parts to create a whole. This activity also addresses how to complete patterns, hypothesize, and test a rule. In "Toony Loon" students improvise their own musical patterns and tunes on unique xylophones. The teacher's guide includes additional hands-on activities and activity sheets.*

## SSRP Evaluators' Comments

This program develops thinking and reasoning skills, emphasizing a multiple intelligence approach and encouraging creativity. Four of the six activities could be used from kindergarten through adulthood. With reference to the Ohio Math and Science Learning Outcomes, two of the six activities (BLOX) incorporate motion concepts by having the students create screen-saver type projects using shapes, perspectives, speed, size, and music.

## System Requirements

Macintosh: System 6.0.7; CD-ROM drive; 4MB RAM; 3.5" floppy drive; printer; color monitor  
Windows/DOS: Windows; CD-ROM drive; printer; VGA monitor

## Reference No.

ENC-005113

# The Graph Club with Fizz and Martina

Grades K-4

WARE  
SOFT

Macintosh Version 1.13, Windows Version 1.2  
1995

Average SSRP Score: 4.00

## Availability

Tom Snyder Productions, Inc.  
80 Coolidge Hill Road  
Watertown, MA 02172  
Telephone no.: (617) 926-6000  
Toll-free no.: (800) 342-0236  
Fax no.: (617) 926-6222

## This software can be used for:

Remediation/review; Problem solving; Demonstration; Assessment;  
Enrichment; Collaborative projects

## Software set:

Order no.: GRT-A (Macintosh or Windows) \$99.95

Note: Curriculum kit material must be purchased separately. Contact publisher for other package information.

## Abstract

This software program is designed to teach students to use graphs to communicate information, answer questions, and solve problems. It is intended to help them make the transition from graphing with manipulatives to graphing in the abstract. Another goal is to teach students the relationship between different representations of the same data, such as a picture graph, bar graph, and table. Designed to support the NCTM's Curriculum and Evaluation Standards for School Mathematics (1989), the program seeks to encourage cooperative learning, problem solving, and cross-curricular integration. Sample graphs are included with the software for exploring and/or matching. Applications to upper elementary and middle school are possible. For example, circle graphs can be labeled with whole numbers, fractions, or percents, and two views of the same graph can be opened and each labeled differently. The program offers five modes of operation to help students collect information, answer questions, make decisions, and solve problems. The Explore mode generates a pair of graphs in an open-ended environment, while the Match mode generates a random graph and challenges students to create a different type of graph to represent the same data. Using the Create mode, students enter collected data for graphing. The Guess mode encourages critical thinking skills and helps students understand that there are often many good answers to a question. A teacher's guide is included.

(Author/LDR)

## SSRP Evaluators' Comments

Teachers need to spend time with the software before using it. The scales are set but may be changed, and teachers may want to modify some examples that were used for line graphs. A very complete and informative teacher guide is provided. This program can be a complete unit. Many support materials are included, such as student activity portfolios. Assessment ideas are provided in the guide. Recommended for K-4 but can be used for 5-8 when doing line and circle graphs. Percents can be demonstrated.

## System Requirements

Macintosh: System 6.07 or higher; 1MB RAM; color monitor recommended. Network version requires AppleShare  
Windows: 4MB RAM; color monitor; Network version requires Novell

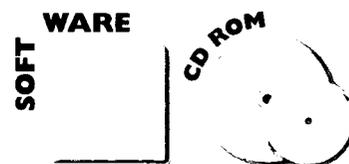
## Reference No.

ENC-004945

# Magic Bear's Masterpieces: A Mathemagical Adventure in Art and Geometry

1993

Grades PreK-4



Average SSRP Score: 3.66

## Availability

Legacy Software  
5340 Alla Road  
Los Angeles, CA 90066  
Telephone no.: (301) 823-2423  
Fax no.: (301) 448-0440

## This software can be used for:

Enrichment; Problem solving; Authoring

## I software package:

\$29.95 (specify version). Free 5.25" disk swap available.  
Note: Availability limited.

## I CD-ROM:

\$49.95 (specify version).  
Note: Availability limited.

## Abstract

*This software learning game encourages inventiveness in learning and features four game choices that introduce numbers and pre-geometry concepts. Specific content areas addressed include visual perception, pattern recognition, and spatial abilities. Each activity starts with a square grid of one hundred tiles, and students can choose from an on-screen palette that displays basic shapes and colors. Any tile selected appears on an easel so that students can rotate it, swap foreground and background colors, and otherwise transform it. They can then click on the desired location to place the tile on the grid. Feedback is provided on each choice. Children can apply their understanding of such concepts as rotation, directionality, sequence, and order. They can explore repetition, equivalence, and one-to-one correspondence, as well as coordinates, area, and fractions. A player's guide is included. (Author/DDD)*

## SSRP Evaluators' Comments

This software is recommended for ages 4-9 by the publisher. The evaluators feel that the ages should be adjusted for children ages 6-12. The tools may pose problems for younger children, resulting in a frustrating experience.

## System Requirements

Macintosh: System 7.0; color monitor; 2MB RAM  
Windows: Windows 3.1 or higher; VGA graphics and SoundBlaster compatible sound boards  
CD-ROM version: CD-ROM drive; may run program from CD-ROM or install on hard drive

## Reference No.

ENC-001658

# Puzzle Tanks

Grades 3-8

SOFTWARE

Average SSRP Score: 3.33

1992

## Availability

Sunburst Communications, Inc. (distributor)  
101 Castleton Street, P.O. Box 100  
Pleasantville, NY 10570-9961  
Telephone no.: (914) 747-3310 (call collect)  
Toll-free no.: (800) 321-7511

## This software can be used for:

Problem solving

## Software package:

Order no.: 6461 (Macintosh) or 6615 (Windows) \$79.95

Note: Contact distributor for additional package information.

## Abstract

*This software focuses on measurement, number sense, logical reasoning, and problem-solving skills. Users are presented with two tanks of different sizes and asked to use a combination of draining and/or filling the two containers to arrive at a specified goal. With no right path for solving the problem and a slim probability that any two problems are the same, this program permits the invention and revision of ideas in order to solve the problem. There are four levels of play: beginner, expert, grand master, and champion. The use of one or two containers for the solution depends on the level of play. Some problems are impossible to work, and number sense is important in recognizing these situations. (Author/LDR)*

## SSRP Evaluators' Comments

Puzzle Tanks is a good problem-solving program. It presents problems that can be solved in several ways.

## Publisher

WINGS for Learning, Inc.

## System Requirements

Macintosh: System 6.0.7 or higher; color monitor; SuperDrive floppy disk drive; hard drive with at least 900KB of free space

## Reference No.

ENC-006402

# Math Shop Spotlight: Weights and Measures

Grades 4–8

SOFTWARE

Series: Math Shop Series  
1990

Average SSRP Score: 3.33

## Availability

Scholastic, Inc.  
P.O. Box 7502  
Jefferson City, MO 65102-9968  
Toll-free no.: (800) 541-5513  
Fax no.: (573) 635-5881

## This software can be used for:

Simulation; Problem solving; Enrichment

## 1 software package:

Order no.: DDN 84556; ISBN 0-590-84556-X \$74.95

Note: Contact publisher for additional package information.

## Abstract

*In this software program, students apply math skills and develop problem-solving strategies as they serve customers in six different shops. In each shop, the problems become more complex with each customer. In order to direct the user's attention toward the analysis of problems, the program shifts some of the responsibility of arithmetic computation to the computer. The shops operate like spreadsheets: as a student enters a possible answer to a problem, the computer automatically performs some of the time-consuming calculations. The student can see how this value affects every aspect of the problem and can observe why a given answer does not work. While working in the shops, students have the opportunity to participate in such activities as converting weeks and days to total days, dividing a dollar amount by an hourly rate to determine the amount of time in hours, and determining what combination of different-sized cartons is needed to package a given liquid quantity. In other activities, students combine given centimeter lengths to achieve a required length and multiply a weight, denoted in pounds and ounces, by a single digit to equal a given weight. Teachers can assign students to shops or allow them to move freely around the mall. An accompanying handbook contains a teaching guide, student pages, and worksheets. The teaching guide includes information on the use of the program in the classroom, a list of skills practiced in each shop, and a reference guide that contains detailed information about all features of the program.*

## SSRP Evaluators' Comments

Measurement seems to be a weak link in our mathematics program. This program, if used in the way in which it is intended, provides opportunities to practice measurement objectives and computational skills. However, teachers need to watch out for the possibility of students obtaining answers by clicking on the arrow keys and not engaging in the problem-solving process. The teacher may want to set rules for how answers are obtained and limit the use of the arrow keys. The program provides opportunities for mental math.

## System Requirements

Macintosh Plus, SE, or II with 1MB RAM; System 6.0.2 or higher; color version requires hard disk or two high-density floppy disk drives

## Reference No.

ENC-000562

## Zurk's Alaskan Trek

Grades 1-5

CD ROM



Series: Soleil's Whole World Learning Series  
1996

Average SSRP Score: 4.50

### Availability

Soleil Software, Inc.  
3853 Grove Court  
Palo Alto, CA 94303  
Telephone no.: (415) 494-0114  
Toll-free no.: (800) 501-0110  
Fax no.: (415) 493-6419

### This software can be used for:

Standard instruction; Enrichment; Information retrieval/resource;  
Assessment; Collaborative projects; Problem solving; Authoring

### 1 CD-ROM:

Order no.: ZAT-T (Macintosh/Windows) \$44.95  
Note: Contact publisher for additional package information.

### Abstract

This CD-ROM, part of a series that teaches math, science, and language concepts in an exploratory and engaging context, is designed to introduce students to Alaska. Throughout the activities, students learn life science, math, and languages while developing reading, writing, and critical thinking skills. Sample activities include creating scenes with plants and animals to observe animal behavior, predator and prey relationships, and animal and plant adaptations. Students are also given the opportunity to write observations and scripts about animals' behavior and their interactions with plants and other animals. Users can explore the relative weights of Alaskan animals in both metric and English standard units of weight. Using a field guide, students identify plants and animals and learn how they are used by Native Alaskans. The accompanying teacher's guide includes instructions on how to install and run the program on a PC or Macintosh computer. Also provided are lists of suggested questions or activities that support each activity in the computer program, as well as extension and home follow-up activities. The guide gives a description of each activity's objectives, pictures of Alaskan animals and plants, and a list of resources. (Author/RA)

### SSRP Evaluators' Comments

This CD-ROM is an excellent program for integrating all curricular areas. We would suggest that it be introduced during whole group instruction to facilitate independent use.

### System Requirements

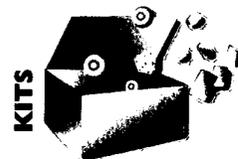
Macintosh: 8MB RAM; double-speed CD-ROM drive; VGA 256 color monitor  
Windows: 8MB RAM; Windows 3.1 or Windows 95; double-speed CD-ROM drive; VGA 256 color monitor

### Reference No.

ENC-006489

# Feed Me! Investigating the Needs of Living Things, 1st ed., Level III

Grade K



Series: *KinderVentures, Windows on Science*  
1994

Average SSRP Score: 4.66

## Availability

Optical Data School Media  
512 Means Street NW, Suite 100  
Atlanta, GA 30318  
Telephone no.: (404) 221-4500  
Toll-free no.: (800) 524-2481  
Fax no.: (404) 221-4520

## This software can be used for:

Remediation/review; Standard instruction; Tutorial; Enrichment;  
Information retrieval/resource; Assessment; Game; Simulation;  
Collaborative projects; Problem solving; Demonstration; Authoring

## 1 kit:

Order no.: 277-X \$395.00

## Abstract

This kit, part of the *KinderVentures* series developed by *Windows on Science*, is a multisensory program developed to help children use scientific processes and methods in investigating healthy foods. The adventures of *Pocket and Tails*, twin *Wanderoos*, guide teachers and students through both familiar and new concepts, incorporating videodiscs, hands-on activities, literature, and manipulatives. Topics include plant and animal growth and development, farms, and the physical and chemical changes that occur during food preparation. The CD-ROM features activities with the alphabet, numbers, shapes, and colors. It also includes picture puzzles, learning games, and animations, as well as music clips, sound effects, and narrated stories. The accompanying teacher's guide provides reproducible student worksheets, a bibliography of children's literature, and connections to other disciplines, multicultural perspectives, careers, and basic skills. In addition, it provides detailed lesson plans, a bar code index to laserdisc images and movies, and both individual and group activities. Sample activities have children classify foods according to their place on the food pyramid, identify plant and animal parts, and work in cooperative groups to create recipes and measure ingredients. Suggestions are given for creating a classroom *Science Discovery Center* and for helping children develop their own projects, such as multimedia journals, puppets, and musical instruments. In addition to traditional assessments, the guide offers activities that would be appropriate for inclusion in portfolios or as alternative assessments. Visuals and manipulatives include a felt board of the food pyramid with removable food items, illustrated Sequencing Cards, and a set of measuring cups and spoons. A Spanish version of the kit is available. (Author/LCT)

## SSRP Evaluators' Comments

This is an excellent multimedia package. CD, laserdisc, and guides should be used as a complete program to be most effective. The CD could be used alone. The grade level use is described as kindergarten, but we feel it would be very usable with preschoolers and first-graders and that it would even be an excellent resource for grades 2-4. The multimedia graphics are very well done, a wide variety of content areas are covered, and it is great fun!

## System Requirements

Macintosh: System 7.0 or higher with multimedia support; 4MB RAM; 1-8MB free hard drive space; color monitor; CD-ROM drive  
Windows: 386 or above; Windows 3.0 with multimedia support; 4MB RAM; 1-8MB free hard drive space; color monitor; CD-ROM drive

## Reference No.

ENC-005588

# Destination: Rain Forest

Grades K-6



Series: *Imagination Express*

1995

Average SSRP Score: 4.66

## Availability

Edmark Corporation  
6727 185th Avenue NE  
Redmond, WA 98073  
Telephone no.: (206) 556-8400  
Toll-free no.: (800) 426-0856  
Fax no.: (206) 556-8430

## This software can be used for:

Standard instruction; Tutorial; Enrichment; Information retrieval/resource; Authoring

## 1 CD-ROM:

Order no.: 701-1608 \$39.95

Note: The above price reflects an educator's discount and includes a teacher's guide.

## Abstract

*This CD-ROM, part of the Imagination Express series, discusses the rain forests of the world, encouraging students to explore their creativity, develop their writing skills, and produce interactive electronic books and printed works. Students may select scenes, choose and animate characters, invent plots, write stories, and narrate pages. They can also add music, conversations, and sound effects to their stories. The Rain Forest Fact Book, a talking book about Rain Forest people and creatures, offers factual information about rain forest ecology, the Kuna Indian people, and exotic animals such as anteaters, eyelash vipers, and oropendalas. Students can read the Fact Book entirely, look up information by topic, or watch video presentations. As they work on their projects, students are assisted by the Story Ideas section and the writing tips and topics presented by rain forest characters. Sample projects include illustrated books and poetry, on-screen puppet plays and theater productions, and research reports and multimedia presentations. Text tools enable students to write the words to a story, place them on the page or in a background, and select a text color, font, and size. Sound tools allow students to record narrations in which their characters sing, laugh, and speak. The Adult Options section allows teachers to specify which tools are accessible to students. It also enables them to customize the program so that younger students can play with characters in a scene and make simple picture books, or so that older students can create elaborate reports and multimedia productions. The PC version requires a sound-output device. [This resource was acquired, cataloged, and abstracted for ENC by the EPIE Institute.]*

## SSRP Evaluators' Comments

This is basically a creative writing software package; however, a lot of rain forest information is provided to be used as needed. While assessment is not an integral part of the software, a multimedia production (sound, music, movement) is created that can be assessed.

## System Requirements

Macintosh: System 7.0; CD-ROM drive; 8MB RAM; 13" monitor; hard drive  
Windows: Windows 3.1; 386 or higher; CD-ROM drive, Super VGA monitor

## Reference No.

ENC-005199

# Gizmos & Gadgets

Grades 3-6

WARE  
SOFT

Series: *Super Solvers*

1995

Average SSRP Score: 4.33

## Availability

MECC (distributor)  
6160 Summit Drive North  
Minneapolis, MN  
Telephone no.: (612) 569-1500  
Toll-free no.: (800) 685-6322, ext. 788  
Fax no.: (612) 569-1755

## This software can be used for:

Enrichment; Game; Simulation; Problem solving

## I Macintosh/Windows disk:

Order no.: GAG3544AE \$29.95

## Abstract

*This software program, part of the Super Solvers series, is designed to build physical science skills and introduce students to physics concepts such as magnetism, simple machines, electricity, force, gravity, and friction. The program uses color graphics, animation, and sound effects in over 200 puzzles and simulations that help students develop such thinking processes as observing, communicating, comparing, and organizing, as well as relating, inferring, and applying. Set against the Super Solvers city of Shady Glen, this program challenges students to outwit the Master of Mischief, who has taken over the Shady Glen Technology Center. Students must work from a blueprint to build a vehicle. First, they must collect the necessary parts by searching the warehouse, solving physical science puzzles along the way, and dodging the Master's Cyber Chimps who try to thwart student attempts. The parts they need to find include wheels, gears, pulleys, levers, magnets, and electric circuits. Eight different types of puzzles automatically adjust to students' skill level. These puzzles provide immediate feedback to hands-on experiences. The program includes online help, hints, and program instructions. The comprehensive teacher's guide provides a scope and sequence matrix, student activities, extensive explanations for using the program in the classroom, and teacher resources. The software supports SoundBlaster or compatible sound card or Microsoft sound card. [This resource was acquired, cataloged, and abstracted for ENC by the EPIE Institute.]*

## SSRP Evaluators' Comments

This program is very fast paced and students would enjoy its video-game format. Since it offers a variety of physical science applications, students would need to have some background with simple physical science principles. Extension activities could be easily created for this program. This is the type of software that makes learning fun and exciting!

## Publisher

The Learning Company

## System Requirements

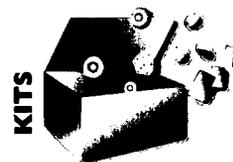
Macintosh: System 7.0.1 or higher; 4MB RAM; color monitor  
Windows: 386 or above; 3MB RAM free; VGA graphics and color monitor; sound card  
DOS: 286/10MHz or better processor; 550KB RAM free; VGA graphics and monitor; sound card

## Reference No.

ENC-005261

# Weather in Action

Grades 4-6



Series: National Geographic Kids Network  
1990

Average SSRP Score: 4.33

## Availability

National Geographic Society  
Educational Media Division  
P.O. Box 98018  
Washington, DC 20090  
Toll-free no.: (800) 368-2728  
Fax no.: (301) 921-1575

## This software can be used for:

Tutorial; Information retrieval/resource; Simulation; Collaborative projects; Problem solving; Demonstration .

## 1 kit:

Order no.: P93040 (Macintosh) \$375.00  
Tuition and telecommunications cost: \$115.00  
Note: Contact publisher for additional package information.

## Abstract

This curriculum unit, developed by the National Geographic Kids Network, encourages students to investigate weather by gathering and interpreting real data. The Kids Network is a telecommunications-based science curriculum that allows students to collaborate as research scientists by conducting original research and finding their own answers. Using a computer, they record and graph data, display software-generated maps, and send information electronically. In this unit, students learn to measure and manipulate real data from weather parameters, cloud observations, and the water cycle. Other topics include weather extremes, temperature, cloud types, and weather patterns. The kit includes a demonstration disk and software manual for the Kids Network, and a teacher's guide that provides six weeks of lesson plans, supplemental materials, and reproducible activity sheets. Additional materials include a variety of wall maps, 20 thermometers, and 30 copies of the Weather in Action kids' handbook, which provides background information. There is a toll-free number to renew the tuition and telecommunications subscription, or to replace some kit components. (Author/DEB/LCT)

## SSRP Evaluators' Comments

If a district can afford it, the project allows students to meet many of the objectives on the Ohio Proficiency Test and those recommended in *Curriculum and Evaluation Standards for School Mathematics* (1989) in an authentic setting. Students would enjoy collaborating with other students hooked into the network. Districts pay for the six weeks the unit takes and then have the option to pay a fee to remain on the network. Maps, student guides, activity sheets, and a teacher guide are provided. Teachers can call National Geographic for assistance if needed.

## System Requirements

For all platforms: telephone line  
Apple IIGS: 512K RAM and ROM version 1.0 or higher; color monitor; 3.5" and 5.25" disk drive; printer; modem (minimum 1200)  
IBM or compatible: 640KB RAM (1MB or higher recommended); DOS 3.3 or higher (5.0 recommended); mouse; color monitor with color MCGA graphics; 3.5" disk drive; hard drive or two 3.5" disk drives; printer; modem  
Macintosh: 2MB RAM for System 6.0.5, 6.0.7, or 7.0; 3.5" disk drive; hard drive; printer; modem

## Reference No.

ENC-001516

# Wolves

Grades 1-6

WARE  
SOFT

Series: *Explore-A-Science Plus; Explore-A-Story Plus*  
1993

Average SSRP Score: 3.25

## Availability

William K. Bradford Publishing Company  
16 Craig Street  
Acton, MA 01720  
Telephone no.: (800) 421-2009  
Fax no.: (508) 263-9375

## This software can be used for:

Tutorial; Enrichment; Information retrieval/resource; Authoring

## Software package:

\$75.00

## Abstract

*This software program is an interactive science, reading, and writing program with a full-feature word processor that allows students to enact and retell a story, change the scenes, or make a story of their own. On completing this Explore-A-Science program about wolves, it is intended that students will be able to classify the gray wolf by its physical attributes and compare it with other animals. They will also have experience with identifying the three basic stages of a wolf's life cycle, describing the cooperation of the pack community, and designing and describing a wolf territory. The program is divided into three parts: Story Teller, Story Maker, and Activities. Story Teller presents the story in animated pictures that can be moved like puppets and in words that can be read aloud. Students can use Story Maker to retell the story or to write a new one, and Activities gives students an opportunity to further explore story making and to practice creating with words and concepts. Finally, Story Ideas or Story Starters provide prompts for writing new stories. For Spanish and French-speaking students the program provides the ability to type many of the necessary accented characters. [This resource was acquired, cataloged, and abstracted for ENC by the EPIE Institute.]*

## SSRP Evaluators' Comments

This software seems dated. We do not think that students today would be very motivated to respond favorably to the required tasks. This software is rather slow and uninteresting, and in reality would be boring for kids!

## System Requirements

Macintosh: System 6.0.7 or higher; color monitor  
Apple: for Apple II Series  
DOS: color monitor; mouse; EGA graphics; MS-DOS

## Reference No.

ENC-005186

# Aviation Adventure

Grades 3–12



Average SSRP Score: 4.33

1994

## Availability

Knowledge Adventure, Inc.  
1311 Grand Central Avenue  
Glendale, CA 91201  
Toll-free no.: (800) 542-4240  
Fax no.: (818) 246-8412

## This software can be used for:

Simulation; Enrichment; Game; Information retrieval/resource

## 1 CD-ROM:

\$9.95 (sale price)

## Abstract

*This CD-ROM is a multimedia program that explores aircraft, aerodynamics, and aviation history and technology. Students enter the program from a simulated air traffic control tower and from there they can explore one of the many sections of the program. One section, the Aviation Theater, contains full-motion videos of aviation topics, while in the Aviation Reference Library students can select different categories of aviation knowledge, such as early aviation, civil aviation, and technical advances. Another section, the Aircraft Encyclopedia, provides pictures, data, and narrated text on 200 military, commercial, and rotary wing aircraft. In the Aviation Lab, students can explore the inner workings of an aircraft through electronic dissection, and in the Paper Plane Factory students receive aerodynamics lessons and learn to make twelve different paper airplanes. The CD-ROM contains a number of games, such as a flight simulator called the F4U Secret Sortie and another game called the Glider Game, which puts students in an imaginary plane looking for thermals and avoiding other objects. Finally, the Aviation Adventure Trivia Quiz challenges players to complete all five levels of aviation trivia to win. [This resource was acquired, cataloged, and abstracted for ENC by the EPIE Institute.]*

## SSRP Evaluators' Comments

This software has a high interest level for all students. It would be most effective as a tool for the integration of social studies and language arts into the science curriculum. *Aviation Adventure* is a fun and informative program.

## System Requirements

Windows: MPC CD-ROM drive; 8MB hard disk space; 4MB RAM (8MB recommended); color SVGA graphics; Windows 3.1 or higher; MPC compatible sound card; mouse

## Reference No.

ENC-005006

# Thinking Like a Scientist: Process Skills and Critical Thinking

1995

Grades 4-6

SOFTWARE

Average SSRP Score: 3.00

## Availability

Educational Activities, Inc.  
1937 Grand Avenue  
Baldwin, NY 11510  
Telephone no.: (516) 223-4666  
Toll-free no.: (800) 645-3739  
Fax no.: (516) 623-9282

## This software can be used for:

Remediation/review; Tutorial; Enrichment; Assessment; Problem solving

## Software package:

Order no.: MDK-20037 \$169.00  
Available in Macintosh and Windows  
Note: Contact publisher for additional package information.

## Abstract

*This software program uses colorful graphics and animations to help students use science to make decisions and to think critically. The program contains lessons that guide students through the processes of the scientific method. Each lesson offers a series of interactive laboratory simulations that engage the students in the specific process skills. The concept and skill are defined in context with multiple examples from sports, health, nutrition, botany, and earth science. Students can test their knowledge with a multiple-choice, point-and-click format, which also allows them to discover and apply the information. Correct responses are rewarded and incorrect responses are branched to a remedial sequence that assists the student in understanding the error. Topics include variables in controlled experiments, qualitative and quantitative experiments, guided calculations, and data tables. Students get experience in interpreting graphs and making predictions based on patterns, probability, and sample information. The teacher's guide provides a program overview, management suggestions, and classroom strategies. The software is available in both Windows and Macintosh platforms. (Author/LCT)*

## SSRP Evaluators' Comments

The software needs to be updated to current standards, such as incorporating multimedia. Because the tutorial is in text format, students are required to read throughout the program, which hinders low readers. The content is very good and covers a wide range of scientific inquiry. The use of tables, graphs, and diagrams was excellent. Despite its limitations, we would recommend this program to help reinforce teaching scientific processes and data analysis.

## System Requirements

Macintosh: System 6 requires 2MB RAM, System 7 requires 4MB; color monitor  
Windows: contact publisher for specific requirements

## Reference No.

ENC-006075

# Mystery Matter

Grades 3-8

WARE  
SOFT

Series: Science Inquiry Collection  
1991

Average SSRP Score: 2.75

## Availability

MECC  
6160 Summit Drive North  
Minneapolis, MN 55430-4003  
Telephone no.: (612) 569-1500  
Toll-free no.: (800) 685-6322, ext. 788  
Fax no.: (612) 569-1755

## This software can be used for:

Problem solving; Information retrieval/resource

## Software package:

Order no.: MS-134 \$34.95

## Abstract

This software is a discovery-learning simulation that features two programs to help students test unknown matter for certain physical and chemical characteristics. In *Matter Search*, students are assisted by a robot in the testing, comparing, naming, and reviewing of a specific substance. The variables used for testing are water, temperature, magnetism, conductivity, pH, and density. Students then use the information they gather through the test to identify the mystery matter. There are three levels of challenge: easy, medium, and hard. The second program, *Matter Maker*, allows students to view various chemicals and create mystery matters for others to examine. Students can choose either a solid, liquid, or gas to be their mystery matter and they can then designate its various properties, such as its formula, melting or boiling point, pH, density, or radioactivity. Other students are then given the opportunity to guess the mystery matter. The software also includes a teacher's information section that includes strategies for classroom use of the program, student worksheets, and suggested follow-up activities. The software supports AppleShare, Corvus, and Digicard networks. [This resource was acquired, cataloged, and abstracted for ENC by the EPIE Institute.]

## SSRP Evaluators' Comments

This software provides a simulated test of an unknown using seven different tests. After students put the unknown through these tests, their results are compared to a list of chemicals, elements, and solutions. By elimination, the students choose their unknown. Data is recorded by student name and number of trials for the teacher to view or print. The program also provides lists of the different matters with a list of their chemical composition and the reactions each would have with the testing situations. The graphics were primitive but the problem solving was worth overlooking it.

## System Requirements

Apple IIe/IIc/IIgs: 128KB RAM, 3.5" or 5.25" floppy drive; ProDos  
Macintosh: Macintosh LC, 3.5" floppy drive, Apple IIe emulator  
DOS: IBM PC family and compatibles

Reference No. ENC-005249

# Radar Rooster Presents Fowl Weather

1996

Grades PreK-3

WARE  
SOFT

Average SSRP Score: 3.66

## Availability

Meridian Creative Group  
5178 Station Road  
Erie, PA 16510  
Telephone no.: (814) 898-2612  
Toll-free no.: (800) 695-9427  
Fax no.: (814) 898-0683

## This software can be used for:

Tutorial; Enrichment; Simulation

## 1 CD-ROM (Windows):

ISBN: 1-88705-003-5 \$18.95

## Abstract

*This CD-ROM features lessons in weather safety. By clicking on the four major types of weather events—tornadoes, snowstorms, thunderstorms, and floods—students can receive information on the causes of each phenomenon. They can also see actual film footage of the events, learn about locations that are safe and those that are not, and receive instructions about proper outdoor attire. (FEB)*

## Comments

*Radar Rooster Presents Fowl Weather is an engaging program to help reinforce science, health, and safety concepts. Movies of dangerous weather are viewed first to help students understand how those situations develop and why they are dangerous. Afterwards, there is an exploratory game. Students are presented with a variety of responses to that dangerous weather scenario. A student's incorrect response is "counseled" with why that would not be a good response to the situation. A correct response results in a simulation of that type of weather and the negative consequence. Correct responses are further reinforced with an explanation as to why that was the safest choice. One minor criticism is that the tornado scenario did not allow for the variation of a house without a basement. We also liked looking for hidden "goodies" that the program hid on the game screens, like the space shuttle taking off and the purple penguins. Overall, we thought this was a fun program for younger children that reinforced learning concepts.*

## System Requirements

Windows: 486DX, 33 MHz (Multimedia level II recommended); 1MB hard drive space; 4MB RAM (8MB recommended); Windows 3.1 or higher; double-speed CD-ROM drive; 16 bit audio

## Reference No.

ENC-005789

# Interdisciplinary/Integrated Math and Science Software

## Sciences I

Grades 4–12

CD ROM



**Series: Thematic Applications  
1995**

**Average SSRP Score: 4.50**

### Availability

Educational Activities, Inc.  
1937 Grand Avenue  
Baldwin, NY 11510  
Telephone no.: (516) 223-4666  
Toll-free no.: (800) 645-3739  
Fax no.: (516) 623-9282

### This software can be used for:

Enrichment; Information retrieval/resource; Problem solving;  
Assessment; Collaborative projects; Authoring; Standard instruction

### 1 CD-ROM:

Order no.: CDR-23001; ISBN 0-7925-3400-X \$99.00

Note: Contact publisher for additional ordering information.

### Abstract

*This CD-ROM, part of the Thematic Applications series, introduces students to the themes of dinosaurs, weather, inventions, and space and the solar system. The series teaches students how to locate, manipulate, organize, and analyze data, as well as how to draw conclusions and communicate effectively. Each of the seven units in the series incorporates computer literacy, math, writing, science, social studies, research tactics, and art. The activities ask students to gather information and use it to build databases, spreadsheets, and graphs, as well as to develop word processing, desktop publishing, and multimedia skills. Students also use simulations and role-playing scenarios to interpret science and apply what they have learned to make policy decisions. Sample activities include researching and describing the typical day of a favorite dinosaur, writing a newspaper article from the perspective of an alien exploring planet Earth, and creating a timeline highlighting important inventions. The teacher's guide includes suggestions for assessment, information about Internet field trips, a guide to resources on the CD-ROM, and outlines of more than 100 activities. (Author/LCT)*

### SSRP Evaluators' Comments

This is a series of guided templates that lends itself to portfolio assessments and problem-based learning. Step by step, students are led to other resources to find the information that they need to organize and form databases. The information resources are not included, although students can be sent into the Web from this disc with your own classroom capabilities. Students will become familiar with word processing (Claris Works), spreadsheets, paint programs, databases, and putting together presentations using all of the above.

### System Requirements

Macintosh: 5MB RAM; System 7.0 or higher; color monitor; CD-ROM drive; ClarisWorks 2.1 or higher; QuickTime 2.0  
Windows: 386; 4MB RAM; color monitor; CD-ROM drive; Microsoft Works 3.0; Video for Windows

### Reference No.

ENC-003993

# Wood Car Rally

Grades 3–8

SOFTWARE

1991

Average SSRP Score: 4.00

## Availability

MECC  
6160 Summit Drive North  
Minneapolis, MN 55430-4003  
Telephone no.: (612) 569-1500  
Toll-free no.: (800) 685-6322, ext. 788  
Fax no.: (612) 569-1755

## This software can be used for:

Enrichment; Game; Standard instruction; Simulation; Collaborative projects; Problem solving; Demonstration

## Software package:

Order no.: MS-214 (DOS) \$34.95

## Abstract

*This software is a discovery-learning simulation promoting scientific content and processes. Students experiment with five variables: car shape, car weight, car lubrication, ramp length, and ramp angle. The car shape variable permits the student to choose boxy, racy, or Indy, the car weight variable ranges from 3.5 to 8.5 pounds, and the car lubrication permits a choice of either none, oil, or graphite. The ramp length options runs between 2 and 8 feet, and the level can be set at either 10, 15, or 20 degrees. The program contains two major options: Practice Track and Competition Track. The Practice Track allows students to collect, organize, and interpret data to solve a problem. They also gain experience with controlling variables, determining their effect, and designing experiments. The Competition Track actively involves students in problem solving, asking them to investigate and determine how set car and ramp variables influence the distance a wood car will travel. There are three levels of challenge: easy, medium, and hard. This program also includes a teacher's information section that offers strategies for classroom use of the program, student worksheets, and suggested follow-up activities. [This resource was acquired, cataloged, and abstracted for ENC by the EPIE Institute.]*

## SSRP Evaluators' Comments

This is an older piece of software with very simple basic graphics; however, the students are actually changing variables and experimenting with test runs while given challenges as a car runs down a ramp. The disc keeps track of the student trials and can print them to analyze data. The program also has the capability for the teacher to call up student data (this can also be printed). Students are given experiences with motion, inertia, friction, etc.

## System Requirements

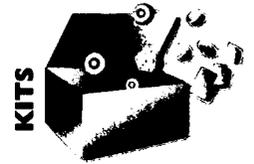
Apple II+/IIe/IIc: 128KB RAM  
DOS: 3.5" or 5.25" floppy drive

## Reference No.

ENC-005251

# Whales and Their Environment

Grades 4-8



Series: *The Voyage of the Mimi*  
1992

Average SSRP Score: 3.50

## Availability

Sunburst (distributor)  
101 Castleton Street, P.O. Box 100  
Pleasantville, NY 10570-9961  
Telephone no.: (914) 747-3310 (call collect)  
Toll-free no.: (800) 321-7511

## This software can be used for:

Collaborative projects; Problem solving; Standard instruction;  
Enrichment; Information retrieval/resource; Assessment;  
Microcomputer-based laboratory

## 1 kit:

Order no.: 6404-6953 (Macintosh) \$495.00  
Order no. 1831-KG (5.25" Apple) \$390.00

Note: Contact publisher for additional package information.

## Abstract

*This component of The Voyage of the Mimi curriculum allows students to explore their physical environment and conduct a variety of experiments. The curriculum is based on the story of the 72' ketch Mimi and her crew, who set out upon the open seas to locate and study whales. The program combines videos, laserdiscs, computer software, sensors, and print materials to present an integrated set of concepts in mathematics, science, social studies, and language arts. In this module, students measure light, temperature, and sound with sensors that connect to a computer and then use their data to compare their environment to that of whales. This particular component includes both a student and teacher's guide, computer disks, and the hardware necessary for converting the computer into a laboratory. The teacher's guide includes an introduction, suggested teaching strategies, extension activities with blackline masters, and answers to questions. (Author/KSR)*

## SSRP Evaluators' Comments

This is an excellent kit but requires a lot of teacher instruction in the beginning. There is a variety of activities to enhance student inquiry-based learning. Kit materials provide superb support.

## Publisher

WINGS for Learning, Inc.

## System Requirements

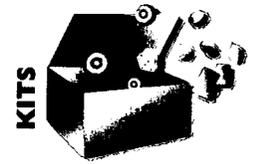
Macintosh: 4MB free hard drive space; 1MB RAM; 3.5" high density drive; color monitor  
Apple: Apple IIe, IIGS (will not operate on Apple IIc)

## Reference No.

ENC-001073

# Too Much Trash?

Grades 4 – 6



Series: National Geographic Kids Network

1992

Average SSRP Score: 4.66

## Availability

National Geographic Society  
Educational Media Division  
P.O. Box 98018  
Washington, DC 20090  
Toll-free no.: (800) 368-2728  
Fax no.: (301) 921-1575  
ENC has only the Macintosh kit.

## This software can be used for:

Standard instruction; Enrichment; Simulation; Collaborative projects;  
Problem solving; Authoring

## 1 kit:

Order no.: T93080 (Macintosh), T92080 (DOS), T90080 (Apple II):  
\$325.00  
Tuition and telecommunications cost: \$115.00  
Note: Contact publisher for additional ordering information.

## Abstract

*This curriculum unit, part of the National Geographic Kids Network, encourages kids to investigate trash production, disposal methods, and strategies for reduction. The Kids Network is a telecommunications-based science curriculum that allows students to collaborate as research scientists by conducting original research and finding their own answers. Using a computer, they record and graph data, display software-generated maps, and send information electronically. Students begin this unit by examining a sample of classroom waste, considering various definitions of trash, and composing their own definitions. They then start an investigation to determine how much trash is produced in their school and community and where it goes after the garbage truck takes it away. Throughout the unit, students keep research journals in which they record hypotheses, observations, and other data. In subsequent activities, students use telecommunication to collaborate with their teammates about trash production and disposal methods. They also take an in-depth look at incinerators and landfills and analyze reduction strategies. The kit includes Macintosh program diskettes and a user's manual, as well as a teacher's guide, reproducible activity sheets, and a student handbook that encourages the three Rs: recycling, reuse, and reduction. The teacher's guide contains lesson objectives, teaching tips and background information, and materials needed. It also offers homework suggestions and extension activities for the students. Three wall maps and sample library catalog cards are included. (FEB/LCT)*

## SSRP Evaluators' Comments

This is an excellent piece of software that is based on student input. It requires Internet access. Students are able to connect to other classes and share data and input and compare and analyze data results.

## System Requirements

For all platforms: telephone line  
Apple IIGS: 512KB RAM and ROM version 1.0 or higher; color monitor; 3.5" and 5.25" disk drive; printer; modem (minimum 1200)  
IBM or compatible: 640KB RAM (1MB or higher recommended); DOS 3.3 or higher (5.0 recommended); mouse; color monitor with color MCGA graphics; 3.5" disk drive; hard drive or two 3.5" disk drives; printer; modem  
Macintosh: 2MB RAM for System 6.0.5, 6.0.7, or 7.0; 3.5" disk drive; hard drive; printer; modem

## Reference No.

ENC-005233

# What's the Secret?

## Volume 2

Grades 3-12



Series: 3M Learning Software Series: Newton's Apple.  
1995

Average SSRP Score: 4.66

### Availability

Imation Software  
1 Imation Place  
Oakdale, MN 55144  
Toll-free no.: (800) 219-9022

### This software can be used for:

Enrichment; Information retrieval/resource; Game; Collaborative projects; Problem solving; Demonstration; Authoring

### 1 CD-ROM:

(Macintosh/Windows) \$29.95

### Abstract

This CD-ROM, part of a collection based on the TV series Newton's Apple, opens with a mural that represents four major sections the user may explore: flight, glue, the Arctic, and the brain. Each section contains a series of icons that do different things. Science Try It icons provide an activity including a procedure, predicted outcomes, and the scientific principles that explain the outcome. Newt (an icon representing a young Isaac Newton) offers science trivia about the various topics. Gadget TV presents QuickTime movies about the topic section. For example, movies about spinning, wings, helicopter blades, helicopter controls, and torque are featured in the Flight section. Clicking on the Clock icon brings up timelines for the history of the various sections. Another section, the Doctor's Office, provides answers to questions such as what causes people to shiver and how a doctor can fix a broken tooth. (Author/DEB)

### SSRP Evaluators' Comments

This is a piece of software so rich in content and varied in type of presentation that it would hold students' interest for a long time. It is an excellent integrated math/science program. The help features are extensive. This CD-ROM contains so much material and so many varied activities that there is practically nothing it doesn't cover in one form or another. We thought it was great!

### Publisher

3M Learning Software

### System Requirements

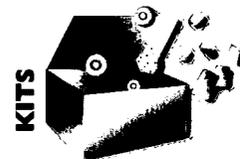
Macintosh: 030 CPU, 25 MHz or better; System 7.0; 8MB RAM; color monitor; double-speed CD-ROM drive  
Windows: 486/25 SX or better; 4MB RAM (8MB recommended); MS-DOS 5.0; Windows 3.1; color monitor; SoundBlaster (or compatible) audio card; speakers; double-speed CD-ROM drive

### Reference No.

ENC-004974

# Acid Rain

Grades 4-6



Series: National Geographic Kids Network  
1992

Average SSRP Score: 4.66

## Availability

National Geographic Society  
Educational Media Division  
P.O. Box 98018  
Washington, DC 20090  
Toll-free no.: (800) 368-2728  
Fax no.: (301) 921-1575  
ENC has only the Macintosh kit and does not have the acid rain test kit.

## This software can be used for:

Standard instruction; Enrichment; Simulation; Collaborative projects;  
Problem solving; Authoring

## 1 kit:

Order no.: T93051 (Macintosh), T92051 (DOS), T91051 (Apple): \$375.00  
Tuition and telecommunications cost: \$115.00  
Acid rain test kit: \$33.50  
Note: Contact publisher for additional ordering information.

## Abstract

*This kit, part of the National Geographic Kids Network, encourages students to investigate acid rain by gathering and interpreting real data. The Kids Network is a telecommunications-based science curriculum that allows students to collaborate as research scientists by conducting original research and finding their own answers. Using their computer, they record and graph data, display software generated maps, and send information electronically. In this unit, students investigate sources of acid-producing gases in their community and learn about the relationship between human activities and the acid rain problem. They begin by using pH paper to measure the acidity of various household liquids, and then they build their own rain collectors and measure the acidity of their rainwater. After students review their rain data and read letters from their teammates, they make and evaluate predictions, review their data and findings and vote on whether action should be taken to stop acid rain. The kit includes Macintosh program diskettes, a teacher's guide, and a software manual, as well as a student handbook and reproducible activity sheets. The student handbook provides information on sources of acid rain, how it is formed, the acid rain cycle, and acid rain as an international problem. The teacher's guide contains lesson objectives, background information, homework suggestions, and extension activities for the students. The Acid Rain Test Kit, which includes pH paper and charts, is delivered separately. (FEB/LCT)*

## SSRP Evaluators' Comments

This is an excellent piece of software for the classroom that is looking to involve telecommunications into the curriculum. It requires the students to collect data and share that information with other students in another place that is also connected. This would be a great class project!

## System Requirements

For all platforms: telephone line  
Apple IIGS: 512KB RAM and ROM version 1.0 or higher; color monitor; 3.5" and 5.25" disk drive; printer; modem (minimum 1200)  
IBM or compatible: 640KB RAM (1MB or higher recommended); DOS 3.3 or higher (5.0 recommended); mouse; color monitor with color MCGA graphics; 3.5" disk drive; hard drive or two 3.5" disk drives; printer; modem  
Macintosh: 2MB RAM for System 6.0.5, 6.0.7, or 7.0; 3.5" disk drive; hard drive; printer; modem

## Reference No.

ENC-005232

# Kids and the Environment

Grades 2-6

SOFTWARE

Series: Choices, Choices  
1994

Average SSRP Score: 3.50

## Availability

Tom Snyder Productions  
80 Coolidge Hill Road  
Watertown, MA 02172  
Telephone no.: (617) 926-6000  
Toll free no.: (800) 342-0236  
Fax no.: (617) 926-6222

## This software can be used for:

Problem solving; Collaborative projects; Simulation

## Software package:

\$99.95

## Abstract

This software program focuses on environmental issues and presents children with a realistic dilemma filled with difficult choices. Topics covered in this program include landfills, recycling, source reduction, and social and individual responsibility. The central dilemma concerns the garbage that has been strewn on the soccer field at Cherry Hill School. The students, as captains of the soccer team, must determine how to use the field for practice. As they reach a consensus about what direction to take, students discuss long and short term solutions, make choices, and evaluate the consequences of those choices. They must also weigh alternatives, initiate change, set priorities, and establish goals based on those priorities. As students work through the dilemma, they encounter multiple situations, and each choice yields a different set of results. The teacher's guide provides learning objectives, suggestions for preparing the class to use the program, lesson plans, and vocabulary lists. [This resource was acquired, cataloged, and abstracted for ENC by the EPIE Institute].

## SSRP Evaluators' Comments

Limited graphics provide a good teacher tool to promote group problem solving. While we think this is a good piece of software, we believe that there are other classroom activities to promote critical thinking skills and decision making that do not require software purchases.

## System Requirements

Macintosh: 1MB RAM (black and white version) or 2MB RAM (color version); hard drive

## Reference No.

ENC-005134

43

# The Even More Incredible Machine

1994

Grades 4-8

CD ROM



Average SSRP Score: 4.00

## Availability

CUC Software Direct (distributor)  
7100 West Center Road, Suite 301  
Omaha, NE 68106-9850  
Toll-free no.: (800) 757-7707  
Fax no.: (402) 393-3224

## This software can be used for:

Enrichment; Game; Simulation; Problem solving

## 1 CD-ROM:

\$34.95 (DOS)

## Abstract

*This program, the sequel to Sierra's Incredible Machine, helps students use applied physics to solve a series of 150 puzzles. Students can manipulate such items as pinwheels, dynamite, ropes, buckets, and balloons to build machines that will solve the puzzles and that will allow students to build their own creations. By taking the Guided Tour with Professor Tim, students learn their way around the program and how to use parts and build machines. The main menu offers a variety of other options, such as Puzzle Play where students can solve puzzles built by Professor Tim. In Professor Tim's Workshop students can change or build new puzzles. In Head-To-Head, students can compete with a friend in a puzzle-solving contest. Students can keep track of which puzzles they have solved in Sign-In. In Tutorial, Professor Tim walks students through the process of building their own puzzles. Each screen has help and hint icons that will provide suggestions if a student is stumped by a puzzle. There is also a Parts Bin containing a dozen programmable parts, the look or behavior of which can be changed by the student. Some of the parts include pulleys and steel cables that can be used to tie objects, hang things, or hoist things off the ground. Belts are used to hitch any two rotating parts together, such as gears, generators, electric motors, and mandrill motors. Users may select English, Spanish, French, or German languages. [This resource was acquired, cataloged, and abstracted for ENC by the EPIE Institute.]*

## SSRP Evaluators' Comments

This was excellent for problem solving that involves Rube-Goldberg type devices. This could be used for science fair projects, *Invent America*, and playing with simple machine concepts. Even the choices of music and noises were great. We had difficulty loading it—it took some thought.

## Publisher

Sierra On-Line, Inc.

## System Requirements

DOS: 386SX or higher; CD-ROM drive; 6MB free hard drive space; 2MB RAM; DOS 5.0 or higher; 3.5" floppy drive; VGA display; mouse; supports SoundBlaster, ProAudio and 100% compatible sound cards

## Reference No.

ENC-005108

# DinoPark Tycoon

Grades 4-12

WARE  
SOFTWARE

1993

Average SSRP Score: 3.66

## Availability

MECC  
6160 Summit Drive North  
Minneapolis, MN 55430-4003  
Telephone no.: (612) 569-1500  
Toll-free no.: (800) 685-6322, ext. 788  
Fax no.: (612) 569-1755

## This software can be used for:

Enrichment; Problem solving; Collaborative projects

## Software package:

Order no.: MC-230 (Macintosh) \$49.95

## Abstract

This software program allows students to practice and build skills in estimating, reading graphs, problem solving, and forecasting. Students set up and run a dinosaur roadside attraction. They are given a bank loan to start the business and must purchase land, animals, materials, and supplies. They must also hire employees. Estimating skills are used as the entrepreneurs calculate the cost of the items needed and compare them to the cash on-hand. Students must make decisions on day-to-day operations, plan long-range strategies, and forecast the volume of attendance in relation to ticket price and season. Problem-solving skills are used to resolve such problems as dinosaurs escaping, generating enough capital to buy another dinosaur species, and falling attendance. Students must read, understand and react to graphs, the office desktop, and the general ledger showing data on park attendance, profit, income, and expenses. Decisions on changing the ticket price must be made before the start of the fiscal quarter. As admission fees come in, investments into the business can be made to buy a parking lot, more animals, land, supplies, or materials. Animals can be bought or sold at auctions held once a quarter. Students can investigate other bidders to outbid them for the rarer dinosaurs or they can put dinosaurs up for sale to raise cash. [This resource was acquired, cataloged, and abstracted for ENC by the EPIE Institute.]

## SSRP Evaluators' Comments

Dinopark Tycoon is an open-ended problem-solving program that encourages the students to plan and budget with a limited amount of money and time. We found it to be very fast paced.

## System Requirements

DOS: 386 or better recommended  
Tandy1000/3000: 6.4MB RAM; hard disk; VGA monitor; mouse; DOS 5.0  
Macintosh: hard disk; System 6.0.7 or higher

Reference No. ENC-005024

# Mystery Objects

Grades 2-4



Average SSRP Score: 3.33

1991

## Availability

MECC  
6160 Summit Drive North  
Minneapolis, MN 55430-4003  
Telephone no.: (612) 569-1500  
Toll-free no.: (800) 685-6322, ext. 788  
Fax no.: (612) 569-1755

## This software can be used for:

Problem solving; Collaborative projects; Game; Enrichment

## Software package:

Order no.: MS-211 \$34.95

## Abstract

This software is a discovery-learning simulation in which students use scientific instruments to test an object for its physical properties. They have a variety of tools available to them, such as Funny-Feeler, which tests the object for texture, and Sizer-Upper, which measures the object for length, width, height, or diameter. Heavy-Holder weighs the object, Super-Sniffer describes how it smells, See-Shaper describes its shape, and Color-Seeker tells its color. Students then use the gathered information to identify the hidden object. There are two instructional programs: Practice Sessions and On Your Own. The Practice Session program features an on-screen hint option and asks students to identify a mystery object that is hidden among three distracter objects. In the On Your Own program, students must identify a mystery object from among five other items, and they receive no help. They can also select the level of difficulty, choosing either easy, medium, or hard. Both programs keep track of student performance. This software includes a teacher's information section that provides strategies for classroom use of the program, student worksheets, and suggested follow-up activities. [This resource was acquired, cataloged, and abstracted for ENC by the EPIE Institute.]

## SSRP Evaluators' Comments

Installation of *Mystery Objects* on an IBM compatible computer was made unnecessarily difficult due to typing errors in the manual. When changing directories, the backslash (\) is needed, not the slash (/). Otherwise, installation is fairly direct and easy. In the resource manual there are blackline masters for record-keeping and instruction. The worksheet for recording test results on an object is helpful. It would be more helpful if the software program incorporated that feature. The program engages students in problem solving and develops various strategies for completing the task. The teacher options allow the use of standard or metric measurement.

## System Requirements

Apple II+/IIe/IIc: 128KB RAM  
DOS: 3.5" or 5.25" floppy drive

Reference No. ENC-005250

# SSRP: Software for Problem Solving and Inquiry

Other Items Reviewed in the SchoolNet Software Review Project			Content	Learning Approach	Technical Approach	Assessment	Number of Standards Addressed	Average Level of Alignment (out of 5)	Average SSRP Score (out of 5)
Title	Grade Level	Comments							
3D Dinosaur Adventure	PreK-5	Entertaining approach to study of dinosaurs ... good "reference" section.	4	2	3	n/a	6	3.83	<b>3.00</b>
5 a Day Adventures	K-12	Very good for teaching and reinforcement of health and nutrition concepts.	4	5	3	n/a	4	4	<b>4.00</b>
Africa	1-12	Good supplemental piece ... not recommended for isolated use.	4	5	3	n/a	2	3	<b>4.00</b>
Amazing Me: Understanding How the Body Works	PreK-K	The laserdisc lends itself to group instruction; CD uses game format.	3	3	3	n/a	3	1.33	<b>3.00</b>
Animals and How They Grow	PreK-2	A very well presented but very basic piece of software.	3	3	3	n/a	1	3	<b>3.00</b>
AnnaTommy: An Adventure into the Human Body	5-8	A disappointment; difficult to navigate. Not recommended for classroom.	2	3	2	n/a	1	2	<b>2.33</b>
Becoming Successful Problem Solvers: Set 1	4-7	Excellent setting for open-ended collaborative problem solving.	5	5	3	n/a	10	5	<b>4.33</b>
Bingwa Multicultural Software: PreK & K Module	PreK-K	Application moves very slowly and may cause student to lose interest.	3	1	3	n/a	2	1	<b>2.33</b>
Bingwa Multicultural Software: 1st & 2nd Grade Module	1-2	This series has a lot of potential but just doesn't deliver.	3	1	3	n/a	2	1	<b>2.33</b>
Bio Sci II Elementary Edition	3-6	Materials would be an effective supplemental teaching tool for K-12.	3	1	3	n/a	5	3.6	<b>2.33</b>
Birds and How They Grow	PreK-4	Nice photographic presentation ... Good for beginning or nonreaders.	3	3	3	n/a	2	4	<b>3.00</b>
Body Systems: How Your Body Parts Work Together	1	Accompanying lessons lack inquiry. Weak correlation to standards.	3	1	3	n/a	5	3.42	<b>2.33</b>
BodyScope	3-8	Very basic. Wouldn't recommend due to better available programs.	2	3	2	n/a	1	5	<b>2.33</b>
Bug Adventure	PreK-3	Excellent as a resource for research. The graphics are entertaining.	3	-	3	n/a	4	3	<b>2.00</b>
Building Perspective	4-12	Excellent way to develop spatial relationships and problem solving.	3	3	3	n/a	3	3.66	<b>3.00</b>
Butterflies [CD-ROM]	PreK-4	Would be good with ESL students.	3	3	3	n/a	4	3	<b>3.00</b>
Butterflies [Video]	K-12	This video is fantastic! We highly recommend its purchase.	4	3	3	n/a	5	5	<b>3.33</b>
Clock Works	1-3	Old and has primitive graphics, but lets teacher change all the parameters.	3	2	3	n/a	2	4.5	<b>2.66</b>
Computational Games	4-8	Seems dated but still effective. Order of operations covered thoroughly.	3	1	3	n/a	2	2.5	<b>2.33</b>
Continuing with Addition and Subtraction	2-4	Concept development was minimal and the focus was on drill.	3	2	3	n/a	5	2.79	<b>2.66</b>

# SSRP: Software for Problem Solving and Inquiry

## Other Items Reviewed in the SchoolNet Software Review Project (cont'd)

Title	Grade Level	Comments	Content	Learning Approach	Technical Approach	Assessment	Number of Standards Addressed	Average Level of Alignment (out of 5)	Average SSRP Score (out of 5)
Davidson's Zoo Keeper	1-6	Problem-solving activity covering the environmental needs of animals.	4	5	3	n/a	3	3.66	<b>4.00</b>
Dinosaur Discovery	K-12	Children have to be highly motivated to use this for any length of time.	3	1	2	n/a	4	3.25	<b>2.00</b>
Dinosaur Safari	3-9	Designed primarily as a game . . . educationally, tasks are questionable.	4	2	3	n/a	3	3	<b>3.00</b>
Dinosaurs	K-6	Would not recommend using this program.	3	1	2	n/a	1	1	<b>2.00</b>
Dinosaurs: Giant Reptiles	PreK-4	Not problem solving software. Would be appropriate for a learning center.	3	3	3	n/a	2	2.5	<b>3.00</b>
The Discoverers	1 and Up	Packed with information! We would recommend this for 4th grade and up.	4	3	3	n/a	5	3.39	<b>3.33</b>
Dr. Know-It-All's Innerbody-works: Junior Version	4-6	Excellent teacher and student materials; adapted to large classroom settings.	4	1	3	n/a	2	4	<b>2.66</b>
Early Math	PreK-1	A slow-moving program; no way to preset for individual students.	3	1	3	n/a	3	1.66	<b>2.33</b>
Ecosystems: Island Survivors	4-8	Lack of problem solving; non-challenging dilemmas, lack of choices.	3	3	3	n/a	-	-	<b>3.00</b>
EL-Fish: The Electronic Aquarium	4 and Up	There is relatively no educational value with this software.	2	2	3	n/a	-	-	<b>2.33</b>
Exploring Measurement, Time, and Money	K-2	Aligned well with 4th grade proficiency test and of high interest for students.	4	3	4	n/a	4	-	<b>3.66</b>
Exploring the Solar System and Beyond	PreK-2	Outstanding graphics. Information is excellent, accurate, and complete.	3	3	3	n/a	2	4.5	<b>3.00</b>
Eyewitness Encyclopedia of Nature	K-12	Possibilities are wide open for integration into almost any discipline.	5	3	3	n/a	10	4.7	<b>3.66</b>
The Factory: Strategies in Problem Solving	4-9	The program encourages critical thinking.	4	3	4	n/a	2	2.5	<b>3.66</b>
Fatty Bear's Birthday Surprise	PreK-3	More entertainment than educational; difficult to incorporate in classroom.	1	3	3	n/a	-	-	<b>2.33</b>
A Field Trip into the Sea	2-10	Could be used as a reference tool. Graphics are distorted at times.	3	1	3	n/a	4	2.5	<b>2.33</b>
Fizz & Martina at Blue Falls High	4-6	Provides good framework for group problem solving.	4	2	3	n/a	10	3.89	<b>3.00</b>
Four Footed Friends	PreK-3	This software does not meet any of the Ohio Science Standards.	2	1	3	n/a	-	-	<b>2.00</b>
Fraction Concepts, Inc.	3-5	Older and primitive graphics, but many teacher parameters can be changed.	3	1	2	n/a	4	3.5	<b>2.50</b>
Fraction Munchers	3-12	Effective for drill and practice; easily modified for different grade levels.	3	1	4	n/a	3	2	<b>2.66</b>

# SSRP: Software for Problem Solving and Inquiry

## Other Items Reviewed in the SchoolNet Software Review Project (cont'd)

Title	Grade Level	Comments	Content	Learning Approach	Technical Approach	Assessment	Number of Standards Addressed	Average Level of Alignment (out of 5)	Average SSRP Score (out of 5)
Fraction Practice Unlimited	4-6	Older and primitive graphics; many teacher parameters can be changed.	3	1	4	2	4	3.5	<b>2.50</b>
Freddi Fish & the Case of the Missing Kelp Seeds	PreK-3	Fun and engaging; entertains while offering challenging problems to solve.	5	1	4	n/a	5	4.2	<b>3.33</b>
The Gems of Hubble	K-12	Seems most appropriate for intermediate, middle, and high school students.	2	1	2	n/a	1	3	<b>1.66</b>
Graphers	K-4	Software is more of a tool than a curriculum content piece.	1	3	3	n/a	2	4	<b>2.33</b>
The Great Barrier Reef	3-12	No problem solving/higher order skills for the learner to engage in.	3	1	3	n/a	1	3	<b>2.33</b>
Hands-On Math: Computer Simulated Manipulations . . .	K-8	Basic skill and drill program. Minimal activities.	3	2	3	n/a	9	3	<b>2.66</b>
Hands-On Math: Learning with Computers and Math . . .	K-8	Requires extensive teacher direction in K-4; use of guide is essential.	3	3	3	n/a	3	2.33	<b>3.00</b>
Hop to It! Fun with Number Lines	K-3	Offers limited problem solving and assessment opportunities.	2	1	3	2	2	4	<b>2.00</b>
How the West Was One + Three x Four	4-12	Introduces the order of operations and the importance of parentheses.	4	1	3	n/a	5	3	<b>2.66</b>
The Human Body	K-3	It is a video picture book.	2	3	3	n/a	1	1	<b>2.66</b>
The Incredible Laboratory	3 and Up	Purpose very unclear. Does not align with National Standards for Science.	2	1	3	n/a	-	-	<b>2.00</b>
Introduction to Addition and Subtraction	K-2	Limited in its potential for classroom use. More engaging programs available.	2	1	3	n/a	2	3.5	<b>2.00</b>
The King's Rule: Mathematics and Discovery	4-12	Simple and straightforward. Nothing really motivating about it.	2	1	3	n/a	1	5	<b>2.00</b>
Learn About Animals	K-2	Out of date. Not challenging or intuitive. Totally teacher directed.	3	2	2	n/a	1	1	<b>2.33</b>
Learn About	K-3	Very out-dated; poor graphics. Wouldn't recommend purchasing.	3	3	3	n/a	2	1	<b>3.00</b>
The Magic School Bus Explores the Human Body	1-5	Difficult at first . . . but interest would probably be high.	3	1	3	n/a	1	4.5	<b>2.33</b>
The Magic School Bus Explores the Solar System	1-5	Value is questionable when considering proficiency and cost constraints.	3	1	3	n/a	3	3.5	<b>2.33</b>
Math Arcade Games	2-8	Would not recommend due to minimal opportunities for education.	3	1	3	n/a	1	3	<b>2.33</b>
Math Around Us Kit; includes World of Math CD-ROM	K	Useful in classroom for introducing concepts, but not as a stand-alone.	4	1	3	n/a	5	3.6	<b>2.66</b>
Math Blaster: In Search of Spot	1-6	Drill and practice are the primary focus, in a game format.	3	1	3	2	2	2	<b>2.25</b>

## SSRP: Software for Problem Solving and Inquiry

### Other Items Reviewed in the SchoolNet Software Review Project (cont'd)

Title	Grade Level	Comments	Content	Learning Approach	Technical Approach	Assessment	Number of Standards Addressed	Average Level of Alignment (out of 5)	Average SSRP Score (out of 5)
Math by Colors	PreK-3	For mathematical computation, drill and kill while painting by numbers.	3	3	3	n/a	2	5	<b>3.00</b>
Math Challenge	K-3	Like traditional math workbook; assessment sheet tracks child's progress.	3	3	3	2	16	3	<b>2.75</b>
Math Games: The World's Greatest Demathalon	1-4	Simply skill and drill. Crude graphics and poor sound. Primitive software.	2	2	2	n/a	2	2	<b>2.00</b>
Math Problem Solver: Level 3	3	Excellent tutorial program. Covers variety of mathematical concepts.	4	3	4	4	16	4	<b>3.75</b>
Math Word Problems	2-6	Good story problem reinforcement for proficient readers.	3	2	3	n/a	4	1	<b>2.66</b>
Max & Marti: A Board Game for Practicing the Four...	1-8	Drill/practice of mathematics operations. Teacher can select or focus drill.	3	1	3	n/a	2	4	<b>2.33</b>
Mayo Clinic Family Health Book	K-12	We would recommend use in middle school and high school grades.	3	1	2	n/a	4	2	<b>2.00</b>
Microsoft Dinosaurs	2-12	High interest; many different areas to delve into. Good resource for students.	4	4	3	n/a	6	2.66	<b>3.66</b>
MicroWorlds: Math Links	4-8	A tool allowing students to create pictures, limited animation, and sound.	3	1	3	n/a	4	3.25	<b>2.33</b>
Millie's Math House	PreK-K	Fun and engaging for primary students. Basically a readiness tool.	4	1	4	n/a	5	4.4	<b>3.00</b>
Miner's Cave	1-8	Excellent reinforcement for 4th grade proficiency materials.	4	3	3	n/a	5	3.79	<b>3.33</b>
Money Works	1-4	Graphics proved to be confusing; some tasks were more engaging than others.	3	3	3	n/a	1	5	<b>3.00</b>
Multimedia Animals Encyclopedia	K-12	Good for information retrieval and enrichment; graphically pleasing format.	4	3	3	n/a	4	4.5	<b>3.33</b>
Number Connections	K-3	Would not recommend for use in classroom; a waste of time.	2	1	2	2	4	2.75	<b>2.33</b>
Number Munchers	3 and Up	Effective for curriculum enrichment; easily adapted for variety of grade levels.	3	1	4	n/a	2	3	<b>2.66</b>
Odell Down Under	4-12	Offers some open-endedness in game format but tends to lack focus.	4	3	3	n/a	2	1	<b>3.33</b>
On the Move: Investigating Machines, People, and Animals...	K	Designed for use within classroom activities.	4	1	2	n/a	2	3.33	<b>2.33</b>
Our Earth	PreK-2	Nice photographs. This software is basically books on CD-ROM.	3	1	3	n/a	7	3	<b>2.33</b>
Outnumbered: A Super Solvers Math Adventure	3-6	An engaging drill and practice software program.	2	3	4	n/a	4	3.5	<b>3.00</b>
Pink Pete's Weather Science Kit	3-8	Poor format and presentation. Would not recommend for any grade level.	3	3	2	n/a	1	4	<b>2.66</b>

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# SSRP: Software for Problem Solving and Inquiry

## Other Items Reviewed in the SchoolNet Software Review Project (cont'd)

Title	Grade Level	Comments	Content	Learning Approach	Technical Approach	Assessment	Number of Standards Addressed	Average Level of Alignment (out of 5)	Average SSRP Score (out of 5)
Pip & Zena's Science Voyage Kit with Video Disk	K-3	A delightful story, incorporates basic concepts of inquiry at a primary level.	3	1	2	n/a	3	4	<b>2.00</b>
The Planetary System	K-12	Young children might enjoy the pictures but the reading would be difficult.	3	1	2	n/a	1	3	<b>2.00</b>
The Pond: Strategies in Problem Solving	2 and Up	Several opportunities for students to experiment with various patterns.	3	2	3	n/a	2	5	<b>2.66</b>
Probability Toolkit	K-8	Concepts presented do not seem appropriate for primary levels.	4	2	3	n/a	2	5	<b>3.00</b>
Putt-Putt Goes to the Moon	PreK-3	If used in the classroom, a guide is definitely needed.	4	1	3	n/a	2	3	<b>2.66</b>
Putt-Putt Joins the Parade	PreK-3	Multiple problems not provided when student chooses to play game again.	3	1	3	n/a	2	1.5	<b>2.33</b>
Quadrominoes	4-8	Challenging for some students. Appropriate for gifted program.	3	1	3	n/a	2	2.5	<b>2.33</b>
Rainforest Bundle	4-8	Incredible amount of information. Definitely recommend for classroom use.	4	5	3	n/a	8	4	<b>4.00</b>
Rainforest Explorer	4-12	Highly recommended for its excellent use of pictures and explanations.	3	2	3	n/a	3	3.66	<b>2.66</b>
Rocks and Soil: How Weather and Other Forces Change...	2	Lessons accompanying videodisc lack inquiry. Weak correlation to standards.	3	1	2	n/a	4	2	<b>2.00</b>
Safari Search	2 and Up	Deals more with problem-solving skills than content-specific information.	3	1	3	n/a	2	3	<b>2.33</b>
Sammy's Science House	PreK-2	Good for introducing observing, predicting, classifying and comparing skills.	3	3	4	n/a	10	4.2	<b>3.33</b>
Science Helper K to 8: 1000 Science & Math Lessons	K-8	Format is text only. Teacher reference tool. Unfriendly for teachers.	4	3	2	n/a	-	-	<b>3.00</b>
Science Adventure II	3 and Up	Informational disk, lots of science content areas including timelines.	4	1	2	n/a	13	3.07	<b>2.33</b>
Sciences 2	4-12	Series of guided templates that lends itself to portfolio assessments.	5	5	4	4	16	4.62	<b>4.50</b>
Scientists	4-12	We feel money for software could be better spent elsewhere.	3	1	3	n/a	1	3	<b>2.33</b>
Shape Up!	K-8	Program is a drawing tool instead of a teaching tool.	3	1	3	n/a	2	3	<b>2.33</b>
Space Adventure II	3 and Up	Gives many opportunities for students to learn about space science.	3	3	3	n/a	7	3.85	<b>3.00</b>
Speed	K and Up	Provides extension activities to do away from computer. Visually appealing.	3	1	3	n/a	3	4	<b>2.33</b>
Spiders	PreK-4	Very basic piece of supplemental software. Simply tells all about spiders.	3	1	3	n/a	2	3.5	<b>2.33</b>

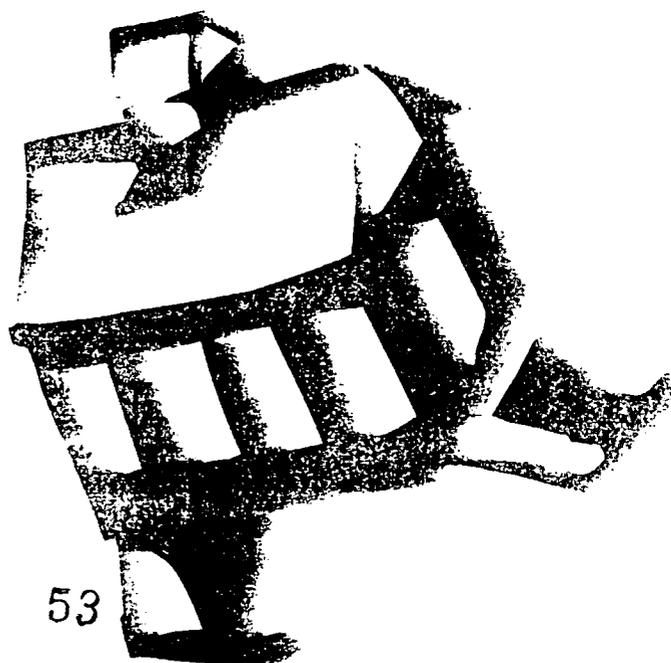
## SSRP: Software for Problem Solving and Inquiry

<b>Other Items Reviewed in the SchoolNet Software Review Project (cont'd)</b>			Content	Learning Approach	Technical Approach	Assessment	Number of Standards Addressed	Average Level of Alignment (out of 5)	Average SSRP Score (out of 5)
Title	Grade Level	Comments							
Stradiwackius: The Counting Concert	PreK-3	Fun program introducing numbers to young children in a musical format.	4	4	4	n/a	4	4	<b>4.00</b>
SuperStar Science CD: Explore the Fundamentals...	2-8	CD-ROM was more elementary than we first thought.	3	3	3	n/a	4	2.75	<b>3.00</b>
Tabletop Jr.	3-6	Highly recommended for sorting, classification, and graphing. Good activities.	4	1	3	n/a	6	4	<b>2.66</b>
TesselMania!	3-12	Aligned with Objective 4-4-1 in Ohio Math Model. Teachers can adapt it.	4	2	3	n/a	6	4.5	<b>3.00</b>
Thinkin' Things Collection 2	1-6	Uses different intelligences and learning styles in activities.	5	3	4	n/a	5	3.39	<b>4.00</b>
Treasure Galaxy!	1-3	Skill and drill. Poorly aligned with math standards, but enhanced by guide.	3	2	3	n/a	7	1.42	<b>2.66</b>
Treasure Mathstorm!	1-3	In classroom, a lot of time would be spent on limited math reinforcement.	3	2	3	n/a	5	2.39	<b>2.66</b>
A Tree through the Seasons	PreK-4	Essentially reads science book to children. Good with ESL students.	3	3	3	n/a	4	4	<b>3.00</b>
Troggle Trouble Math	1-6	More of a game than a learning tool. Not intuitive.	2	2	3	n/a	3	3	<b>2.33</b>
Turtle Math	3-6	Directions difficult ... but does create higher level math techniques.	4	3	2	n/a	14	4.21	<b>3.00</b>
Undersea Adventure	K-7	Provides a lot of information; learners engage with knowledge in passive way.	4	1	3	n/a	3	3.33	<b>2.66</b>
Unlocking Whole Numbers Volume 2	3	Program provides valuable reinforcement and practice.	4	1	3	n/a	10	3.72	<b>2.66</b>
Volcanic Features of Hawaii and Other Worlds	K-12	Young children may enjoy pictures, but text and concepts too difficult for K-3.	3	1	2	n/a	2	3	<b>2.00</b>
Whales [CD-ROM]	PreK-4	Reading skills an important and valuable part of this piece.	4	3	4	n/a	4	3.5	<b>3.66</b>
Whales [Software]	K-6	Should be used more for language arts than for science.	3	2	3	n/a	1	1	<b>2.66</b>
What Air Can Do	PreK-4	A quiet piece of software that does "good stuff."	4	1	3	n/a	3	3.33	<b>2.66</b>
What Do You Do with a Broken Calculator?	3 and Up	Provides opportunities to use mental math strategies. Extremely challenging.	4	2	3	n/a	-	-	<b>3.00</b>
What Is a Bellybutton?	PreK-3	Very engaging; an interactive story-book. Topics not dealt with in depth.	3	3	3	n/a	3	3.33	<b>3.00</b>
What's the Secret? Volume 1	3-12	In-depth coverage of specific areas. No manual or teacher resource.	4	4	3	n/a	7	2.75	<b>3.66</b>
Windows on Science: Earth Science, Volume 1	4-6	Opportunities for open-ended projects and cross-curriculum integration.	5	5	3	1	9	4.22	<b>3.50</b>

# SSRP: Software for Problem Solving and Inquiry

## Other Items Reviewed in the SchoolNet Software Review Project (cont'd)

Title	Grade Level	Comments	Content	Learning Approach	Technical Approach	Assessment	Number of Standards Addressed	Average Level of Alignment (out of 5)	Average SSRP Score (out of 5)
Windows on Science: Earth Science, Volume 2	4-6	Overall, an impressive package, including the teacher resource guide.	5	5	4	n/a	9	4.22	<b>4.66</b>
Windows on Science: Earth Science, Volume 3	4-6	Many opportunities for integration and in-inquiry/discovery approaches.	4	5	4	n/a	14	4.46	<b>4.33</b>
Windows on Science: Physical Science, Volumes 2 & 3	4-6	Educational experiences in this program are primarily passive receptive.	4	1	2	n/a	3	3.66	<b>2.33</b>
Windows on Science: Primary Science, Volume 1	1-3	Topics covered in depth with multiple examples to develop understanding.	4	1	2	n/a	6	3.83	<b>2.33</b>
A World of Plants	PreK-2	More language arts than science. Basically reads a book to the student.	3	1	3	n/a	3	3	<b>2.33</b>
Zurk's Learning Safari	PreK-1	Presents practice in many basic readiness skills.	5	1	3	n/a	1	5	<b>3.00</b>
Zurk's Rainforest Lab	K-4	Runs very slowly. It appears that students would become frustrated.	3	1	2	n/a	4	2.5	<b>2.00</b>





**For All Educators (please check all that apply):**

Years of K–12 teaching experience \_\_\_\_\_ Is your institution:  Public  Private

Are you currently:  A classroom teacher  A school department chair  A curriculum specialist  
 A school administrator  A district administrator  A librarian  
 A teacher educator  A college faculty member  Other \_\_\_\_\_

Is your area:  Science education  Mathematics education  Elementary education  
 Some other area \_\_\_\_\_

Teachers, please circle those grades which you teach

Administrators, circle those for which you have responsibility K 1 2 3 4 5 6 7 8 9 10 11 12

Teacher educators, circle those for which you prepare teachers

**For K–12 Teachers and Administrators:**

Your school designation (e.g., Elementary, Middle, High, ...) \_\_\_\_\_

Would you describe your district as:  Rural  Suburban  Urban

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# Directory of Eisenhower Mathematics and Science Regional Consortia

## **Appalachia Region**

Eisenhower Regional Math/Science Consortium at AEL  
Appalachia Educational Laboratory  
PO Box 1348  
Charleston, WV 25325-1348  
Phone: (800) 624-9120 / Fax: (304) 347-0487  
States Served: Kentucky, Tennessee, Virginia, West Virginia

## **Far West Region**

WestEd Eisenhower Regional Consortium for Science and Mathematics Education  
WestEd Regional Educational Laboratory  
730 Harrison Street  
San Francisco, CA 94107  
Phone: (415) 241-2730 / Fax: (415) 241-2746  
States Served: Arizona, California, Nevada, Utah

## **Mid-Atlantic Region**

Mid-Atlantic Eisenhower Consortium for Mathematics and Science Education  
Research for Better Schools  
444 North Third Street  
Philadelphia, PA 19123-4107  
Phone: (215) 574-9300 / Fax: (215) 574-0133  
States Served: Delaware, Washington DC, Maryland, New Jersey, Pennsylvania

## **Mid-Continent Region**

Eisenhower High Plains Consortium for Mathematics and Science  
Mid-Continent Regional Educational Laboratory  
2550 South Parker Road, Suite 500  
Aurora, CO 80014  
Phone: (303) 743-0990 or (800) 949-6387  
Fax: (303) 337-3005  
States Served: Colorado, Kansas, Missouri, Nebraska, North Dakota, South Dakota, Wyoming

## **North Central Region**

Midwest Consortium for Mathematics and Science Education  
North Central Regional Education Laboratory  
1900 Spring Road, Suite 300  
Oak Brook, IL 60521-1480  
Phone: (630) 571-4700 / Fax: (630) 571-4716  
States Served: Illinois, Indiana, Iowa, Michigan, Minnesota, Ohio, Wisconsin

## **Northeast and Islands Region**

Eisenhower Regional Alliance for Mathematics and Science Education Reform  
Technical Education Research Center  
2067 Massachusetts Avenue  
Cambridge, MA 02140  
Phone: (617) 547-0430 / Fax: (617) 349-3535  
States/Areas Served: Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island, Vermont, Puerto Rico, Virgin Islands

## **Northwest Region**

Science and Mathematics Consortium for Northwest Schools  
Columbia Education Center  
11325 SE Lexington  
Portland, OR 97266-5927  
Phone: (503) 760-2346 / Fax: (503) 760-5592  
States Served: Alaska, Idaho, Montana, Oregon, Washington

## **Pacific Region**

Pacific Mathematics and Science Regional Consortium  
Pacific Region Educational Laboratory  
828 Fort Street Mall, Suite 500  
Honolulu, HI 96813  
Phone: (808) 533-6000 / Fax: (808) 533-7599  
States/Areas Served: American Samoa, Commonwealth of the Northern Mariana Islands, Federated States of Micronesia (Chuuk, Kosrae, Pohnpei, Yap), Guam, Hawaii, Republic of the Marshall Islands, Republic of Palau

## **Southeast Region**

SERVE at Eisenhower Consortium for Mathematics and Science Education  
SouthEastern Regional Vision for Education  
345 South Magnolia Drive, Suite E-22  
Tallahassee, FL 32301-2950  
Phone: (904) 671-6033/Fax: (904) 671-6010  
States Served: Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina

## **Southwest Region**

Southwest Consortium for the Improvement of Mathematics and Science Teaching  
Southwest Educational Development Laboratory  
211 East Seventh Street  
Austin, TX 78701-3281  
Phone: (512) 476-6861 / Fax: (512) 476-2286  
States Served: Arkansas, Louisiana, New Mexico, Oklahoma, Texas

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math and science educators!***



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